14th National Conference on Chronic Disease Prevention and Control

Prevention Successes 2000: Better Health for All



Abstract Book









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Adam's Mark Hotel Dallas, Texas November 30-December 2, 1999 These abstracts have been edited for grammar and usage.
The editors may have inadvertently altered the authors' meaning during the process of corrrecting the text.

These abstracts should not be cited as publications.

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Tuesday, November 30, 1999

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Concurrent Oral Presentations

EZ/EC Health Bench Marking Demonstration Project: Lessons Learned

N. Kanarek, M. Barry, S. Baker, R. Bialek, M. Wemer

Objective: To develop a framework for health bench marking in three communities.

Setting: Recognizing the importance of health to economic revitalization, the DHHS Assistant Secretary for Planning and Evaluation funded the Public Health Foundation to assist three Enterprise Communities or Empowerment Zones with health bench marking over a one-year period.

Interventions: A checklist of activities integral to health bench marking was used to guide the process of engaging the community, assessing needs and assets, setting priorities, determining health bench marks, and communicating findings in three Enterprise Communities and Empowerment Zones during a 12-month period. Technical assistance provided included a glossary, annotated references, a literature review of how a mayor's office might benefit from initiating health activities, meeting facilitation and other administrative support, health data analysis, and an assessment of health issues.

Outcomes: Preliminary lessons learned include the following: 1) communities need a road map and a guide for bench marking, 2) EZ/ECs must identify a point of entry for all partners, 3) communities value a perceived honest broker, 4) community readiness to embark on bench marking varies, 5) bench marking creates a demand for EZ/EC health accountability structures and leadership, 6) planning and action take place simultaneously, and 7) terms that resonate with stakeholders must be identified.

Conclusions: The developed checklist is useful as a guide to the process. Communities need technical assistance to carry out health planning with new partners and within the context of economic development. Readiness to set health bench marks, progress in bench marking, and assistance needed varies across sites.

Learning Objectives: Participants should be able to enumerate the basic steps involved in bench marking, to identify the potential issues at each step, and to use some resources identified.

From Relative Rates to Policy Change: Making the Most of an Epidemiological Report

M. Hernandez, D. Cassady

Objective: To document events prompted by a heart disease city-specific epidemiological report.

Setting: California Department of Health Services.

Intervention: The Cardiovascular Disease Outreach, Resources and Epidemiology (CORE) Program produced an epidemiological report and summary and recommendations brochure outlining heart disease and stroke death rates. The rates were race- and age-adjusted for 245 cities in California with populations more than 20,000. Cities with statistically significant death rates above or below the statewide average were highlighted. The results were widely disseminated to the media, local health departments, hospitals, and academia. The media release and recommendations emphasized environmental changes that cities, communities, and organizations could make to be more heart healthy. The theme was "Making healthy choices easy choices."

Outcomes: The California Department of Health Services committed \$120,000 to fund heart disease prevention projects in cities with high rates of death. These funds were matched 100% by local non-profit hospitals, doubling the total budget to equal \$240,000. An unfunded city secured its own funding for a new heart disease prevention project budgeted at \$5,000 plus one full-time health professional. A local American Heart Association office used the report to successfully advocate for heart healthy policies in 14 cities with high heart disease death rates. Increased activity in the state legislature related to heart disease, including a joint health committee hearing and newly proposed legislation.

Conclusion: City-specific results along with recommendations for environmental changes help to motivate heart disease prevention efforts.

Learning Objective: Participants will be able to identify advocacy strategies that promote solutions to problems identified in epidemiological reports.

Measuring and Monitoring the Nation's Healthy People Objectives: Year 2000 and Beyond

R. J. Klein

Objective: To create a companion volume for *Healthy People 2010* that provides the specific data definition and provides an analysis of the data issues involved in tracking the objectives.

Results: *Healthy People 2010* is currently being developed. It builds on the foundations created by *Healthy People 2000* and contains more than 500 disease prevention and health promotion objectives for the nation. The release of *Healthy People 2010* in January 2000 will consist of three volumes. Volume III is a discussion of data definitions and sources, which includes sections on general data issues such as race and ethnic populations, age-adjustment, and state and local data; the specific operational definition for each objective; and descriptions of the major data sources used to track the 2010 objectives.

Conclusions: This volume will be a vital tool for researchers and policymakers interested in duplicating the *Healthy People 2010* objectives at the state and local level. This presentation will provide a general overview of Volume III, as well as brief discussions on the major data issues concerning tracking the objectives.

Learning Objectives: Participants should have better insight into the data issues involved in tracking the *Healthy People 2010* objectives.

A Health Status Report for Counties: Community Health Status Indicators Project

N. Kanarek, R. Bialek, M. Fraser, L. Snow, C. Brown, J. Bryan, D. Sockwell

Objective: To provide a broad set of indicators for use by local jurisdictions in a new, engaging format.

Setting: A collaboration of Health Resources and Services Administration, the Association of State and Territorial Health Officials, the National Association of County and City Health Officials, and the Public Health Foundation developed a county-specific set of information from various sources. An advisory committee, made up of state and local health departments, federal initiatives and academia, guided the development of the report.

Interventions: What data were already available to local areas, how to present health indicators or construct a health profile, and where information gaps existed were investigated. Information captured in the process of planning the health profile assisted key decisions such as the geographic reporting area, report format, indicators and their sources, comparisons made, and distribution of the brochure.

Outcomes: Paper and web presentations were developed for all U.S. counties. Indicators used consisted of actual county events, state measures, and synthetic estimates. Health data were provided in the context of county characteristics and disease prevention. Peer counties, Healthy People 2010 targets and US rates were used for comparison.

Conclusions: The Health Status Report provides each county a unique health profile in a tested format. While many counties already had data, the brief and simple format communicated to audiences outside traditional public health. Special data needs such as those of rural/frontier communities and racial disparities as well as potential use with APEX-CPH and national performance measurement tools were incorporated into the brochure.

Learning Objectives: Participants should be better able to locate their county profile, compare their counties to others, use the brochure for communicating general community health and use data to create a community health improvement plan.

A Community-Based Case Management Model for Hypertension and Diabetes: Delta Community Partners In Care

D. A. Frate, L. Keys, M. Ginn

Objective: To determine the effectiveness of a community-based health care partnership designed to help the predominately minority, impoverished, and undereducated population in the Mississippi Delta gain control over diabetes and hypertension.

Methods: Health research conducted over the past 15 years in the Mississippi Delta has continually documented the burden such chronic diseases place on the population. Both individual and health system resources are scarce in this region, posing barriers to effective chronic disease management. To attack this issue, the Delta Community Partners In Care project centering on hypertension and diabetes control, was developed by a consortium of local health care institutions, a university research institute, and supported by a national foundation. The intervention model centers on the use of a case management approach delivered by indigenous case workers in 13 clinical sites. Both compliance to pharmacological and individualized nonpharmacological therapy and continuity of care is stressed.

Results: Almost 1,170 patients have been identified in the first 2 years. A statistically significant proportion had their blood pressure controlled. Diabetes control, though improving, has yet to show any significant change.

Conclusion: This model of chronic disease control focuses on the involvement of both the consumer and provider communities in a concerted and effective form of disease management.

Learning Objectives: Participants should be able to discuss how a community-based case management partnership can be developed to help chronically ill patients to manage their disease.

Real Women, Healthy Lives: Photo Documentary Approach to Promoting Healthy Eating and Physical Activity Among Low-Income Women

N. Martinez, E. Takada, K. Bertram

Objective: To improve the health behavior self-efficacy of low-income (food-stamp eligible) women with children throughout California by portraying local people modeling nutrition and physical activity changes as realistic, and to provide tools and access to local resources for taking steps to better health.

Setting: State of California.

Intervention: The skills of a photojournalist were enlisted to conduct in-depth interviews, surveys, and action photography. Black and white photographs and essays in Spanish and English from this process were developed to create a public display featuring 22 California women modeling healthy behaviors. In addition, a take-home booklet was developed to extend the messages of the exhibit and to provide a means for achieving the personal changes recommended by the role models in the display. Included were healthy eating tips, physical activity tips, recipes, and local resource numbers.

Outcome: A total of 77 photograph exhibits were displayed statewide in public facilities including local health departments, social service centers, hospitals, and other community-based organizations. Several were featured in the local media. Of the people who viewed the exhibits and completed a survey, 71% agreed and an additional 17% strongly agreed that the exhibit increased their awareness of healthy eating and physical activity behavior. Other evaluation results showed that at least 78% would likely consider a variety of healthier behaviors.

Conclusion: When targeting a defined population, using a nontraditional approach that uses modeling and the voice of the targeted population, rather than resorting to the standard brochures and pamphlets, is an effective way to promote healthy behaviors.

Strategies for Reaching Men to Provide Health Education and Screening Services

R. Brady, L. Couey

Objectives: Research has repeatedly demonstrated that men have higher death rates for the leading causes of death, yet know little about health in general. As a result of this presentation and discussion, participants will better understand barriers to reaching men and acquire ideas for developing health messages that are tailored to more effectively reach and influence male audiences.

Methods: We will present a brief overview of the Harlem Prostate Cancer Education Project and the resulting findings. This demonstration project was designed to evaluate and integrate analyses of knowledge about attitudes toward and experiences with prostate cancer screening, diagnosis and treatment among African American men in central Harlem and their health care providers.

In addition to print media, the project is currently evaluating the use of talk and noncommercial radio and the use of liaisons with women's organizations. We will also discuss current theories about outreach to men and provide examples of the plans and activities of the New York State Department of Health for integrating theory into practice through the use of focus groups, teaching days and the assistance of a men's health expert. We will report on the results of the focus groups and outline the development of outreach tools used in existing statewide partnerships providing cancer screening and education services.

Conclusions: We learned that general outreach through the use of print and electronic media was an effective means of influencing men to attend educational sessions.

5 A Day the Anishinaabe Way—A Native American Public Education Campaign

N. Pingatore, T. Doll, D. McLean, E. Knurek

Objective: To develop a culturally appropriate Native American 5 A Day for Better Health public education campaign.

Setting: Eleven tribal communities in Michigan.

Interventions: Native Americans traditionally enjoyed diets rich in fruits and vegetables, but current diets high in fat and sugar have contributed to increased chronic disease rates. Health statistics show that heart disease, cancer, and diabetes rates are much higher among the Native American populations in Michigan than among the general population. Because diet is a major contributing factor for heart disease and cancer, there is a need for education that targets Native Americans to increase healthy food habits. To increase awareness of the 5 A Day message, newspaper articles, scripts for radio public service announcements, billboards, brochures, and table tents containing the 5 A Day message were used. Adults and school-aged children were targeted at worksites and schools. Draft materials were developed with input from tribal leaders and health officials then pilot tested in three tribal communities and revised. Final campaign kits were distributed to the 11 tribal communities in Michigan with orientation workshops offered for all sites.

Outcomes: Data will be presented from intercept surveys with 150 community members assessing campaign awareness and response, 5 A Day message awareness, fruit and vegetable intake changes, and perceived barriers to eating 5 A Day.

Conclusions: Culturally appropriate public education campaigns can increase health message awareness and positively effect behavior change.

Small Awards Reap Big Rewards

I. Smith

Objective: To increase the number of community and worksite wellness programs in Texas that promote physical activity and nutrition using small amounts of seed money.

Methods: Using \$100,000, a minigrant proposal system was devised to provide entities a chance to apply for dollars to support beginning a community or worksite wellness program or to enhance current activities. Applicants were asked to submit a proposal that was limited to no more than \$2,499 per calendar year. Each of the 11 public health regions were allotted an amount to award, first to school districts, then to any for-profit or nonprofit entity. The awardees were asked to develop a wellness committee, needs assessment, program plan, supportive environmental change, and evaluation.

Results: Fourteen school districts were awarded funds in FY 1998. Thirty-eight additional entities were awarded in FY 1999. Changes included walking paths, fitness rooms, vending machine changes, walking groups, weight loss programs, and health screenings. Community partnerships were developed to accomplish changes that exceeded the awarded dollars. Grants were used to fund walking tracks, incentive items, instructors, educational materials, and equipment.

Conclusions: A small amount of seed money can bring large chances within a community or worksite setting. This small amount stimulates matching money from community partners to expand services or opportunities. Lasting changes have been made for continued program implementation.

Learning Objective: Participants will be able to describe a minigrant proposal that uses small awards to achieve large results in developing community and worksite wellness programs.

Benefits of Internal Piloting of Physical Activity and Nutrition Interventions

B. Spencer

Objective: To use internal Texas Department of Health Employee Wellness Program to pilot physical activity and nutrition interventions, which will be promoted to worksites across Texas.

Setting: Worksites across the state of Texas.

Interventions: As interest in physical activity and nutrition interventions has increased the demand for easy-to-use, effective interventions has also increased. The Texas Department of Health Community and Worksite Wellness Program has developed a method of producing and promoting interventions that are easy-to-use and have been shown to be effective. By piloting the interventions to our own employees, we have created a means to test the intervention, get feedback from participants and coordinators, and make changes as needed. The intervention procedures and sample materials are then packaged, published, and disseminated throughout the state.

Outcomes: Since May 1998, 17 evaluation surveys have been collected from entities who have conducted the programs. The following results are derived from these responses. One hundred percent felt that the materials were presented in a logical and useful order; 100% felt that the program was a success based on their expectations (41.2%—Very Successful, 58.8%— Somewhat Successful); 100% responded that their participants were satisfied (58% Very Satisfied, 42%— Somewhat Satisfied); and 86% reported that they would conduct the program again at their location.

Conclusions: Piloting programs within your organization before dissemination enhances the adoption rate and satisfaction with the programs by outside entities.

Learning Objective: Participants will better understand the benefits of testing interventions using their own wellness and health promotion programs and employees, and collecting feedback, before promoting the intervention to other entities.

Health Departments Modeling and Diffusing Behavior Change: March Into May

B. Leonard

Objectives: To implement a 10-week incentive-based physical activity behavioral change program for public health department employees, with a long-term goal of diffusing intervention to community.

Settings: Twelve state health departments.

Intervention: March Into May was created and diffused by the National Coalition for Promoting Physical Activity. Twelve health departments volunteered to implement the intervention in the spring of 1998 and were provided guides and monthly conference calls for assistance. Programs were evaluated by percentage of participation, percentage of goal completion and participant stage of change movement. Health departments were encouraged to diffuse it to local health departments, schools and additional worksites.

Outcomes: Twelve state health departments implemented program with an average participation rate of 42%; 8,471 total participants; 65% participant goal completion; and stage movement forward: 80% contemplation, 64% preparation, and 33% action. Diffusion occurred to the community in the following states: Georgia, Maine, New York, Illinois, Arkansas, Texas, Maryland, California, and Idaho.

Conclusions: Interventions that possess favorable diffusion have a good chance of adoption. In light of the limited resources available in the public health community the transference and adoption of proven interventions provides opportunities for cost effective population-based behavior change.

Learning Objectives: To be able to describe the elements of the intervention and the diffusion characteristics, and to describe the evaluation measures of a worksite physical activity intervention.

Adult Worksite Program Based in Elementary Schools Improves Adult Attitudes and Behaviors Regarding Physical Activity and Nutrition

P. Van Zyl York, S. Ehlinger, J. Geppert, C. Kimber

Objective: To increase physical activity and fruit and vegetable intake among adults working in elementary school settings.

Setting: Minnesota elementary schools.

Intervention: A worksite version of the statewide Fitness Fever Program for elementary school students was implemented and formally evaluated via questionnaires administered to a group of 70 intervention schools and 61 control schools of the 654 schools that participated in the student program. Intervention schools were provided with program ideas and calendars for employees to record daily physical activity and consumption of fruits and vegetables during the month of February.

Outcomes: Adults in schools participating in the worksite program were significantly more likely to report trying to eat more fruits and vegetables, paying attention to what they eat, using time during the winter for physical activity, believing that it is important for adults to model physical activity for students, and believing that encouraging students increases children's physical activity levels. Worksite school adults significantly increased intake of fruit and juices, paying attention to what they eat, using free time for physical activity, and enjoying physical activity. Nonworksite school adults significantly decreased fruit and vegetable intake and decreased the average number of days they were active each week.

Conclusions: Adding an adult worksite component to a school-based physical activity and nutrition program provided benefits to adults surveyed within those schools when compared with adults surveyed in schools without the worksite component. These benefits reflected both behavioral and attitudinal changes.

Learning Objectives: Participants should be able to discuss the benefits of a concurrent adult worksite and student school-based physical activity and nutrition program on improving health attitudes and behaviors.

Speaker Training and Coalition-Building Workshops for the Early Detection of Breast and Cervical Cancers

S. Yudell, C. Hoelscher, D. Beaudoin

Objective: To provide training to UCCP partners so that they may educate women about breast and cervical cancers, build community coalitions, and increase awareness of screening services.

Setting: Utah communities.

Interventions: To increase knowledge about breast and cervical cancers, promote the importance of early detection and availability of screening services, and improve the presentation and networking skills of UCCP nurse screeners and health educators, UCCP Public Education Committee members developed a Speaker Training Workshop Manual. A one-day curriculum based on this manual was designed by the UCCP Health Educator with input from committee members affiliated with the American Cancer Society, local health departments, and other partners. Pretest and posttests were developed to assess knowledge about breast and cervical cancers before and after training. The curriculum was piloted, refined, and implemented in November 1994.

Outcomes: Trainees who completed the pretest and posttests demonstrated a mean 72% increase in level of knowledge about these cancers. To date, 262 speakers have completed the training and 11,554 women statewide have attended community presentations. Analysis of program data revealed that 28% of women who presented for screening at a UCCP clinic reported learning about program services through materials or activities sponsored by trained speakers.

Conclusions: Training speakers to educate and build community coalitions is an effective way to reach women who may not otherwise be aware of the early detection message and availability of cancer screening services.

Learning Objectives: Participants should be able to describe how targeted educational and promotional activities can motivate women to use screening services.

Hats Off To Women's Health—An Educational and Recruitment Tool

M. Massey-Douglas, C. Barajas

Objective: To educate and empower women to increase their knowledge and skills while using interactive group participation techniques.

Setting: Women's health forums, workshops, hospitals, community centers, or any classroom setting.

Uniqueness: Oklahoma's Hats Off To Women's Health Program is so unique to the Oklahoma Latino women as it has been presented in Spanish by a trained bilingual Spanish Lay Health Educator. Presentation factors reflect a deep understanding for role-playing Hispanic values, culture, and diversity.

Interventions: The Health Educator of the Oklahoma Breast and Cervical Cancer Early Detection Program, Take Charge! identified a need for an interactive and entertaining method for providing health education to adult learners. Hats Off To Women's Health is an educational skit designed to incorporate group participation while presenting educational information on early detection, screening, and the prevention of specific diseases that affect women.

Outcomes: Hats Off To Women's Health strives for all women to be empowered to increase their knowledge regarding early detection and prevention while implementing healthy behaviors and practices that could save their own lives. The Association for Family and Community Education (FCE), Central Oklahoma Chapter of the Susan G. Komen Breast Cancer Foundation, Business and Professional Women (BPW), and the American Cancer Society (ACS) have participated statewide in the training and implementation of this effective educational program. Women's health coalitions have actively recruited 30 Oklahoma communities for program presentations. A Hats Off To Women's Health Program Planning Guide was developed to assist with recruiting statewide participation and implementation. A video was developed not to replace the skit, but to enhance the recruitment of coalitions and women's organizations to present Hats Off To Women's Health as an educational opportunity for their community. The health message is clear and concise while presenting current information in an enjoyable and participatory format.

Conclusions: Adult education can be fun! Interactive education programs hold the attention of the participants, increase learning and the information acquired is more likely to be acted on. The Hats Off To Women's Health Program Planning Guide and video make an attractive package for educating women to TAKE CHARGE! of their health and participate in screening opportunities for chronic diseases.

Learning Objectives: Participants should be able to strengthen their skills and knowledge for teaching adult learners while using creative interactive techniques.

Welfare Clients as Community Health Workers

M. Murray

Objective: To create an interdepartmental state program capable of increasing contacts between the Breast and Cervical Cancer Control Project (BCCCP) and its targeted populations, while providing authentic employment experience for welfare clients in transition to the permanent workforce. The Missouri Department of Social Services (DSS) hires welfare beneficiaries to serve in their home counties as outreach workers for BCCCP, a Missouri Department of Health (DOH) program offering free breast and cervical cancer screening to low-income women aged 40 years and older. DSS directly supervises the outreach workers. DOH trains them; tracks their activities; and assists with guidance, literature, and media materials.

Results: The workers have been creative and diligent, attracting favorable media attention and a variety of free advertisements. Via presentations and special events, they have contacted 60,000 women, and referred more than 700 women to BCCCP screening providers. From April 1998 to March 1999, at least 142 low-income women were screened for breast and cervical cancers because of outreach worker activity. The program has expanded from 7 counties to 20 counties. Ten workers have successfully traded their outreach experience for permanent employment. The program received a 1998 Vision Award from the Association of State and Territorial Health Officials and a 1999 Missouri Governor's Award.

Conclusion: Program accomplishments in public education, cancer screening, and welfare dependency reduction justify statewide expansion, as funds become available.

Learning Objective: Participants will consider that chronic disease prevention need not be the exclusive province of health organizations and that interdepartmental state partnerships can efficiently accomplish disparate public policy goals.

Evaluation I Session 5

Tuesday, November 30, 1999

Changes in Susceptibility to Cigarette Use After Implementation of a Tobacco Control Program

U. E. Bauer, T. Johnson, R. Hopkins

Objective: To assess tobacco use among young people and attitudes before and after implementation of the Florida Pilot Program on Tobacco Control.

Methods: In February 1998 and 1999, the Florida Department of Health conducted the Florida Youth Tobacco Survey (FYTS), using a two-stage cluster design for public middle school (MS) and high school (HS) students. Representative samples of 11,865 MS and 10,675 HS students in 1998 and 11,724 MS and 9,254 HS students in 1999 were obtained. Response rates for 1998 and 1999 were 80% and 82% for MS, and 72% and 70% for HS. Respondents were grouped into six cigarette use categories: 1) never users not considering smoking, 2) never users who planned to try smoking, 3) experimenters who tried but were not currently smoking, 4) occasional users who smoked on 1–19 of the previous 30 days, 5) frequent users who smoked on > = 20 of the previous 30 days, and 6) former smokers who smoked daily but not in the previous 30 days.

Results: From 1998 to 1999, the percentage of never users and nonconsiderers increased from 38.7% to 42.8% (P = 0.0003) among MS students; and from 24.1% to 30.5% (P < 0.0001) among HS students; occasional users decreased from 13% to 10% (P < 0.0001) among MS students and from 14.6% to 12.7% (P = 0.0006) among HS students; frequent users decreased from 5.4% to 3.8% (P = 0.001) among MS students and from 14.2% to 12.5% (P = 0.03) among HS students.

Conclusion: Striking behavior and attitude shifts occurred among the public MS and HS young people following implementation of a tobacco use prevention program.

Session 5 Evaluation

Tuesday, November 30, 1999

Evaluation of CDC's 'Choose Your Cover' Skin Cancer Prevention Campaign

C. Jorgensen, B. Southwell, S. Pierce

Objective: To describe the advantages, disadvantages, and uses of formative, process, and outcome evaluation in a health communication effort.

Intervention: CDC's 'Choose Your Cover' (CYC) is a national and state health communication campaign targeting young people designed to raise awareness, increase healthy behaviors, and influence social norms regarding skin protection. The campaign includes TV, radio, print public services announcements (PSAs), and a Web site. Formative evaluation for the campaign included an extensive literature review and 40 focus groups designed to understand behavioral determinants and pretest campaign materials. Process evaluation included electronic tracking of air plays of TV PSAs. Outcome evaluation consists of ecologic measures used to track changes in behaviors over time.

Outcomes: Focus groups confirmed literature findings and yielded new information—suggesting the importance of the formative evaluation. Year one process evaluation shows more than 600 million TV viewer impressions, worth \$5.9 million. More than two-thirds of the TV PSAs aired during the day and evening, with one-third being the 60-second PSA—contrary to conventional wisdom. This and other analyses are used to improve the marketing of the PSAs at national and state levels. Outcome measures for monitoring national campaigns cannot separate campaign exposure from other environmental factors. Therefore limited measures were used, and consisted of adding a core question and a skin cancer module to CDC's 1999 Behavioral Risk Factor Surveillance System.

Conclusions: Formative and process evaluation improve potential influence and reach of health communication campaigns. Although outcome measures can track changes over time, determining causality presents challenges.

Learning Objectives: Participants should be able to describe the three types of evaluation methods used to evaluate health communication campaigns, and understand the advantages and disadvantages of each.

Evaluation I Session 5

Tuesday, November 30, 1999

State Tobacco Control Policies and Youth Smoking Behavior

K. A. Stamatakis, D. A. Luke, R. C. Brownson

Context: State policies aimed at controlling access to tobacco by young people are an important component of public health efforts to reduce smoking prevalence among young people and prevent subsequent disease among youths and adults.

Objective: To assess the relationship between state tobacco control policies and youths smoking behavior, as well as other important state political and economic characteristics.

Methods: We conducted a correlational study by using archival data from multiple national surveillance, economic, and sociodemographic data sets. All 50 states provided economic and political data. A standard tobacco control policy score was developed by an expert panel for each state to represent the degree to which states had enacted youth access to tobacco control policies. Aggregated state-level measures of youths smoking behavior were provided by 79,491 young people in 34 states.

Results: State policy scores increased in variability and in mean value over the 4-year period, from a mean score of 7.2 in 1993 to 9.0 in 1996. State policy scores were significantly associated with several state political and economic variables. Significantly lower smoking rates were observed in states with more extensive tobacco control policies.

Conclusions: It is possible to reliably measure the extent to which states are achieving important public health goals in limiting youths access to tobacco products. The increase in the extent of state tobacco control policy has implications for increased prevention and cessation of smoking among young people.

Learning Objectives: Participants should be able to understand the use of a policy rating system in determining state activity in tobacco control and describe the relationships between policy and smoking behavior among young people.

Session 5 Evaluation

Tuesday, November 30, 1999

Using CDC's Evaluating Community Efforts to Prevent Cardiovascular Diseases to document Community Changes in Texas

I. Smith

Objective: To document and assess the efforts of regional and local staff in initiating community changes for the prevention of cardiovascular disease, cancer, and diabetes throughout the state of Texas.

Methods: Central, regional, and local health department staff were trained in June 1997 by staff from the Work Group on Health Promotion and Community Development, University of Kansas, on use of the *Evaluating Community Efforts (ECE)* manual. Additional training was provided on initiating and implementing policy and environmental changes for physical activity, nutrition and tobacco within worksites, schools, restaurants, and community groups. Reporting methods were devised and monthly data collection began in March 1998. Community chances were defined as development of awareness activities (i.e., brown bag lunches, posters, fliers), lifestyle change activities (i.e., walking groups, weight loss classes, smoking cessation classes) and supportive environments established (i.e., flextime policies, established and marked walking trails, low-fat food items available, fitness rooms).

Results: For the 6-month period from March 1998 to August 1998, more than 19,487 technical and educational consultations and 1,549 community changes were documented. From September 1998 to May 1999, almost 80,000 technical and educational consultations and 1,000 community changes were documented by staff.

Conclusions: The *ECE* manual was useful in setting up a reporting and evaluating system for documenting staff efforts to make community changes for physical activity and nutrition. Trends can be noted for activities within certain months, sites, and by individual staff.

Learning Objectives: Participants will be able to take away a system that provides feedback on staff activities and documented changes made in community settings.

California's Environmental and Policy Approaches to Active Living

A. Seeley, S. Hooker, J. Carmen, L. Dusenbury, C. Weidmer, P. Fox

Objective: To establish a statewide physical activity initiative targeting policy and environmental approaches.

Methods: In fall 1996, the University of California, San Francisco and the California Department of Health Services initiated a chronic disease control program to address policy and environmental approaches to promoting physical activity. Staff convened national and international policy advisors and statewide intervention work groups in three areas: older adults, employee health, and community environments. Approaches were developed for the state's Physical Activity and Health Initiative and its partners. Interventions are designed to be innovative, bridge the gap between science and practices, involve nontraditional partners, and place emphasis on policy and environmental change.

Outcomes: Several of the approaches are being implemented. The Active Aging Project has grantees coordinating a supported self-change physical activity program using telephone volunteers. Local broad-based coalitions are developing Safe Routes to Schools projects. Human resources staff are developing new programs that include physical activity options. A newly published document is guiding the program's allocation of funding and development of partnerships and projects for the next 3–5 years. *California Active Living: California's Approaches to Promoting Physical Activity and Health,* provides rationale, descriptions of potential interventions, and a bibliography.

Learning Objectives: Participants should be able to evaluate their interest in 20 policy and environmental approaches that have been outlined during a 2-year process in California.

Promotion of Total No Smoking Food Establishments in the Absence of a No Smoking Ordinance

D. E. Sciarrini

Objective: To use the food establishment (restaurant) permitting process to encourage positive behaviors for cancer and cardiovascular disease prevention.

Setting: Restaurants and other food establishments in Smith County, Texas.

Interventions: The Smith County Public Health District is responsible for the food permitting process in our jurisdiction. When the food order was recently revised, one-third off the permit price was offered for totally no smoking restaurants and food service establishments. A second one-third off was offered for restaurants with six Heart Friendly entrees, or for other food service establishments with a Heart Friendly section of 20 items or more. This multiplied the effect of our cancer and cardiovascular disease prevention program and merged projects between the food inspectors in Environmental Health and the health educators in Health Promotion.

Outcomes: No smoking restaurants with sit-down dining increased from 62 to 112. Total food service establishments that had a no smoking policy increased from 139 to 241. Currently, 34.8% of the food establishments in this county have adopted a no smoking policy. The Heart Friendly discount was first offered this year and our process was proven too difficult. It will be reworked for next year. The 160,000 residents now have published dining options for a heathier environment.

Conclusion: Efforts in disease prevention can be enhanced by multipliers such as merging the food inspection process with cancer and cardiovascular disease prevention.

Learning Objectives: Participants should be able to identify how local health departments can increase their long range effects by combining programs and have at least one option for improving the health of their residents.

Healthy Heart Coalitions Can Change Community, Worksite and School Environments

R. Kasprzyk

Objective: To use new and existing coalitions to establish, expand or improve environments in community, worksite, and school settings to promote heart healthy nutrition and physical activity.

Setting: Twenty-eight coalition sites across New York State.

Interventions: The Healthy Heart Program of the New York State Department of Health funds 28 coalitions (2 of 5 years completed), to use existing partnerships and to create new partnerships in community, worksite, and school settings. Only environmental change objectives were accepted in each workplan. Coalition productivity is profiled in monthly logs as planning products, resources generated, services provided, media usages, community actions, and community changes.

Outcomes: For 18 months, participating coalitions produced 1,000 planning products and tools, generated \$300,000 of in-kind resources, provided and promoted services to 100,000 people, used 5,000 inches of print media and 7,000 minutes of broadcast time; and performed 500 specific community actions resulting in more than 200 actual community, worksite, and school setting environmental changes, which promoted heart healthy nutrition and physical activity.

Conclusions: Coalitions provide an excellent resource for successfully changing environmental structures, policies, curricula and services in community, worksite, and school settings. These partnerships facilitate increased opportunities for people to perform heart healthy behaviors.

Learning Objectives: Participants will become aware of strengths and weaknesses of a large scale coalition-based approach to changing environments that relate to nutrition and physical activity.

Engaging Community Leaders in Efforts to Promote Active Community Environments

A. M. Seeley

Objective: Local community leaders are the primary determinants for how, where, and when environments are rebuilt or developed. Public health's interest and involvement in promoting walkable, bikable communities will heighten in 2000 when the federal objectives to increase the number of children and adults who regularly walk and bicycle are in effect. The California Department of Health Services and the Local Government Commission developed two methods of assessing the readiness and priorities of community leaders to promote environments that nurture active lifestyles. A simple fax-back survey assessed the awareness and readiness of local government leaders to promote policies and environmental changes supportive of active living. City managers, city council members, county supervisors and local planning department directors in all of California's cities and counties were contacted. A second survey was sent to local health department staff, assessing their interest in promoting physical activity in general and likeable and walkable communities in particular. Selected community leaders from diverse local organizations were then invited to a joint strategy session in seven regions throughout the state.

Outcome: Survey results identify a limited number of significant similarities and differences that will guide the state's efforts to engage community leaders in the policy and environmental change projects. Overall, respondents appear much more likely to improve and promote bicycle paths and sidewalks than to use any strategies that impede motorized travel in their communities. Health care costs related to inactive lifestyles is not understood and needs to be incorporated into education about local economic development. Using survey respondents as key contacts, seven regional meetings were convened. These strategy meetings introduced diverse proponents of active communities to one another, and further identified specific strategies that communities can use in the future, enabling the program to support its efforts with additional resources and assistance.

Learning Objectives: Participants will be able to use or adapt this process to engage their own community leaders to promote walking and biking within a community.



Congregational Health Promotion: A Strategy for Reaching Diverse Populations

B. Murph, K. LaMendola

Objectives: To train lay volunteers as Congregational Health Promoters (CHPs) to raise awareness and promote health in their congregations and communities.

Method: The City of Fort Worth Public Health Department, Outreach Section, implemented a pilot group to train volunteers to become the "touchpoints" for health promotion. The pilot consisted of seven diverse groups representing interfaith congregations and a private apartment complex. The training centered on community building with specific activities crucial to health and wellness. Through participatory learning, the CHPs learned to identify health concerns, the resources in the community, network with each other, and to empower the congregations to take an active role in their own health.

Results: Since completion of the pilot in May 1999, the CHPs have made referrals to various agencies, organized health fairs, included health information in their newsletters, provided speakers, set up a community bulletin board, and attended a family violence prevention training sponsored by the Texas Department of Health.

Conclusions: The participatory learning format of the training sessions resulted in a cohesive pilot group. The CHPs have already networked for support and feedback. By using committed members of an established group, population-based health promotion and disease prevention is cost effectively disseminated in an environment with a strong foundation of trust.

Learning Objectives: Participants will be able to discuss how cities, public health departments, and congregations can partner to improve the health of the community.

Empowerment-Based Diabetes Care for Medically Underserved Minority Persons: Making a Difference

C. Tannas, R. Anderson, L. Schwartz

Objective: To demonstrate the use of the empowerment approach to improve diabetes care among underserved, minority persons.

Setting: Detroit Department of Health—Primary Care Centers.

Interventions: The Detroit Diabetes Empowerment Project is a five-year collaborative of the Detroit Department of Health, the Michigan Department of Community Health and the University of Michigan's Diabetes Research and Training Center that began in 1995. The purpose of this project has been to design, plan, implement, and evaluate a databased empowerment program to improve diabetes care among underserved and minority persons in the Detroit Department of Health.

Outcomes: System changes that have occurred include the development of a program to provide affordable diabetes blood testing supplies and additional free diabetes medications. Health centers now provide group visits and group education classes. A free diabetes eye screening is offered semiannually. Three staff members have been certified as Diabetes Educators. Culturally appropriate patient education materials are now used. Annual audit results of the 1,100 people diagnosed with diabetes in this system continue to demonstrate improved patient care outcomes.

Conclusions: Use of the empowerment approach to system change has provided positive and long-lasting system improvements.

Learning Objective: The participants will be able to describe the use of the empowerment approach to system change.

A Formula That Works: Taking Health Assessment Into the Community

K. Cauley, C. Clasen, M. Rodney, W. Mase

Objective: To assess a community-based method of health risk identification and follow-up that uses culturally sensitive methods, community sites, and personalized follow-up.

Methods: A total of 50 Healthy Lifestyle Clinics were held in an urban underserved area during a three-year period. Community Health Advocates were used to publicize these clinics and to follow-up with participants. These clinics were routinely incorporated into the community at sites such as food pantries, soup kitchens, churches, and community centers. Blood pressure, cholesterol and blood glucose, height, weight, smoking, and stress assessments were performed. All participants received healthy lifestyle counseling and information about community resources. Participants with abnormal values received referrals to health promotion programs or to health care providers. Participants receiving referrals were followed up by letter and by personal contact.

Results: More than 1,000 African American and Appalachian people were assessed. Nearly 60% required some form of follow-up. Thirty percent had BP >140/90; 37% cholesterol >200; 13% glucose >140; 51% were overweight, 29% were smokers, and 38% reported a sedentary lifestyle. Through personalized follow-up by a registered nurse and a Community Health Advocate, 36% of those who received a referral visited a physician or made a positive lifestyle change.

Conclusions: Sensitivity to how the minority communities in our urban area prefer to hear about health promotion activities and where they prefer to receive such services has resulted in successful identification of at-risk individuals and successful efforts to get hard to reach people connected with health care providers.

Learning Objectives: Participants should be able to identify factors that lead to success in increasing participation by underserved populations in health promotion and disease prevention programs. Also, participants will learn how community health advisors can advance health promotion efforts among underserved communities.

Enhancing Diabetes Care in a Low-Income, High-Risk Population Through Public Health and Provider Collaboration

A. Albright

Objective: To determine if an enhanced care approach to managing diabetes can be successful among a low-income population in a real world clinical setting through collaboration of the California Department of Health Services Diabetes Control Program (DCP) and MediCal (Medicaid) Special Projects Section, Harbor/UCLA, Santa Barbara Regional Health Authority, and the University of California, San Diego.

Methods: At time of entry in the study, participants were randomized into intervention or control groups. The intervention group received an enhanced form of diabetes care, characterized by a case management approach. Participants in the control group continued to receive standard diabetes care as practiced through their primary-care providers.

Results: The results of selected baseline characteristics of patient population and preliminary hemoglobic A/C results at baseline at 12 and 18 months will be presented at the session.

Conclusion: Enhanced diabetes care in a real-world clinical setting resulted in a significant reduction in HbAlc compared with standard care after 12 and 18 months of intervention.

Learning Objectives: Participants should be better able to discuss elements of diabetes care that result in a reduction of HbAlc in a low-income, high-risk population.

Five A Day, Let's Eat and Play: A Nutrition Education Program for Preschool Children

J. Cooper, P. Levy

Objective: To increase awareness and consumption of fruits and vegetables among preschool children.

Background: The National Cancer Institute recommends that Americans increase their fruit and vegetable intake to at least 5 servings per day to improve their overall health. The 1994 data show that adults consume about 4.4 daily servings; children's intake however lagged behind at 3.4 servings. Good eating habits established during childhood lay the foundation for health in adulthood. The Five A Day, Let's Eat and Play: A Nutrition Education Program for Preschool Children uses creative techniques to encourage young children to increase fruit and vegetable consumption. Through a series of 10 lessons, children participate in creative and interactive experiences. Some lessons include fruit necklaces, vegetable placemats, or chef's hats for children to create. Other lessons are hands on food experiences where children can hold, smell, prepare, and taste fruits and vegetables. Original songs, a storybook, and a fruit and vegetable spinner board also promote the Five A Day concept.

Outcomes: The program was field-tested at three preschool centers. Individual preevaluations and postevaluations showed that recognition of fruits and vegetables rose an average of 50%. Results from a parent questionnaire showed that 90% of children ate more fruits and 62% ate more vegetables after attending the program. The program has been distributed to more than 3,500 preschool sites in Florida and was recently accepted by the United States Department of Agriculture for national distribution.

Learning Objectives: Participants should be able to initiate fruit and vegetable awareness activities among young children.

Diffusion of the Child and Adolescent Trial for Cardiovascular Health (CATCH) Program in Texas

N. Murray, S. Kelder, D. Montgomery, J. Conroy, P. Cribb, G. Parcel

Objective: To develop a model to diffuse CATCH, a school-based diet and physical activity program in Texas elementary schools.

Setting: Texas elementary schools, school districts, and regional education service centers.

Intervention: The impact of prevention programs is limited to the efficacy of the program and the extent to which the program is implemented among the targeted population. CATCH is an elementary school nutrition and physical activity program designed for early prevention of chronic diseases, such as cardiovascular disease (CVD) and diabetes. A randomized trial in 96 schools proved that CATCH improved nutrition and physical activity behaviors among children. To promote implementation of CATCH in Texas, a diffusion model was developed from diffusion theory, previous research in school health diffusion, and empirical data from the targeted population.

Outcomes: The diffusion model includes marketing, interpersonal networking, and media channels of communication. CATCH meets state guidelines for health and PE, is approved by the Texas State Board of Education, exemplifies coordinated school health, and is uniformly appreciated by students and teachers. Interpersonal networking identifies and uses opinion leaders. Media channels include a CATCH promotional video, brochure, "How to" information, and adoption packets. In 6 months of concentrated intervention, several hundred schools have either adopted or are in the process of adopting the CATCH curriculum.

Conclusions: Adoption of an effective prevention program may be accelerated through a theoretically and empirically derived diffusion model.

Learning Objectives: Participants should be able to develop a diffusion model to enhance implementation of school-based prevention programs.

The SunWise School Program: An Environmental and Health Education Program on Sun Safety

M. Cantor, T. Rosseel, L. Rutsch

Objectives: To reduce the incidence, morbidity, and mortality of skin cancer, cataracts, and other ultraviolet-related health effects in the United States. Short-term objectives include reducing the risk of childhood overexposure to the sun by changing the knowledge, attitudes, and behaviors of elementary schoolchildren and their caregivers, and improving the availability of accurate, timely, and useful ultraviolet (UV) data directly to schools and communities across the United States.

Setting: Currently piloted in 35 elementary schools across 17 states. In September 1999, the program will be expanded to include approximately 80 schools in 31 states. National implementation is targeted for the 2000–2001 school year.

Interventions: The SunWise Program builds on traditional health education practices through the use of existing curricula, learning standards, scientific strategies, and evaluation mechanisms. The program is a collaborative effort of schools, communities, health professionals, educators, environmental organizations, meteorologists, local governments, federal agencies, and others. Participating schools sponsor classroom and school activities to raise children's awareness of stratospheric ozone depletion, UV radiation, the largely preventable health risks from overexposure to the sun, as well as simple sun safety practices. Participating schools receive a variety of materials, including a classroom Tool Kit of games, songs, puzzles, storybooks, a CD-ROM, access to the UV Index Web Database, cartoon videos, and more. An *Administrator's Guide* will include sample sun safety policies and guidelines and a *Train the Trainer* video.

Results: SunWise Program effectiveness will be evaluated through a variety of interim and long-term measures, including data from preintervention and postintervention surveys, national UV-behavioral surveys, review committees, focus groups, community meetings, national conferences, and informal feedback. Provisional data from the May 1999 pilot phase include in-class pretests (n = 1,474) with children (aged 5–12 years, 48% male, 52% female), posttests, and a single survey with parents (completed at home). At pretest, only 21% of children used sunscreen all of the time during the summer, 16% wore hats routinely, and 22% wore sunglasses. Knowledge was relatively high with 60% knowing the correct sunscreen number to use. However, 70% of children reported at least one sunburn during the previous summer. Comparisons of surveys gathered at pretest and posttest, as well as associations between children's and parents' responses will be published in professional literature and presented at conferences.

Learning Objective: Participants should be able to discuss the environmental concepts related to ozone depletion, sun exposure, and health effects from overexposure, and describe how schools and teachers can play a major role in protecting children by teaching sun safety behaviors.

Healthy Lifestyles After-School Program: A Public and Private Partnership

G. G. Sneden, C. Heiser

Objective: To evaluate the impact and level of implementation of a community intervention designed to promote fruit and vegetable consumption and physical activity among inactive and obese children in sites with varying capacities.

Setting: Eight after-school programs were matched as control and treatment sites. These included two community-based organizations, two centers in public housing sites, two urban schools in middle-income areas, and two small town schools in lower-income areas.

Interventions: The Texas Department of Health and The Cooper Institute for Aerobic Research collaborated with the Voyager Expanded Learning Program, a national, discovery-based after-school program. The goal was to develop a sustainable program that used physiological and self-reported parent and child physical activity measures, nutrition assessments, weekly newsletters, daily-integrated physical activity, and 5-A-Day messages in the curriculum.

Outcomes: The study documents differences in initial site capacities and tracks their association with program implementation and outcomes. This is of particular concern given that populations with the greatest need often have lower capacity for implementation.

Conclusions: After-school programs offer a unique opportunity to impact the growing number of obese and inactive children. As public health agencies expand their focus to population-based health promotion in diverse community settings. There is a need to build capacity and identify a threshold before using evidenced-based interventions.

Learning Objectives: Participants should be able to apply findings on-site capacity assessment before using similar evidenced-based health promotion interventions.

Taking on Diabetes in Michigan

A. Malow

Objective: To design and implement a statewide diabetes program improving medical outcomes for persons with diabetes by facilitating consistent clinical practice patterns, optimizing self-care, and encouraging productive patient and provider relations.

Setting: Michigan providers and persons with diabetes.

Interventions: Wide variability in providers' clinical practice patterns for diabetes care has been documented in Michigan. To respond to this situation, the Michigan Department of Community Health (MDCH) awarded the Michigan Association of Health Plans (MAHP) Foundation a grant to facilitate a statewide consensus among providers on fundamental core measures for appropriate diabetes care. The MAHP Foundation assembled a steering committee including members from MAHP, MDCH, and the Michigan Public Health Institute providing oversight and direction to identify a set of core measures and develop a plan to implement them into realistic practice patterns. Subcommittees and workgroups consisting of broad-based representation have matured from the Steering Committee to develop and conduct public and provider education initiatives, public relations, and evaluation methods.

Outcomes: A set of core measures and accompanying curricula emphasizing consistent clinical practice patterns, self-care, and productive patient and provider relations were developed and supported by key agencies and numerous provider organizations. Cooperative efforts are underway for statewide implementation of the education initiatives.

Conclusions: Establishing partnerships among community and provider groups can evolve consensus on realistic diabetes care models for statewide implementation.

Learning Objective: Participants should be able to identify key elements necessary for evolving statewide consensus around appropriate, yet realistic, diabetes care models.

Continuous Quality Improvement Cycles of Measurement in Diabetes Care: A Collaborative, Multi-Initiative Approach

B. deShazo, C. Munn

Objective: To improve physician adherence to diabetes treatment guidelines using multiple interventions among providers of care and their patients with diabetes.

Methods: Collaborating with the Alabama Quality Assurance Foundation, the MCO conducted a baseline and postintervention data analysis among Medicare members with diabetes. The study periods were the previous 12 months ending June 30, 1995, and May 31, 1998. Fifty-one physicians and 295 office records were reviewed at baseline; at remeasure, 41 physicians and 658 office records were reviewed. After baseline, Health Partners implemented an intervention plan for providers including the presentation of guidelines, a treatment flow sheet, bench mark comparisons with each baseline physician-specific result, two cycles of MEDIS diabetes eye examination measures, and a list of their noncompliant members with diabetes. Plan members twice received educational materials recommending specific examinations and tests.

Results: The average age was 70 years and 57% were female. Comorbid conditions were prevalent: 72% had hypertension, 37% CAD, 27% were obese, 24% had neuropathy, and 11% were smokers. Six quality indicators determined a physician's Diabetes Quality Indicator Index. The baseline aggregate index was 2.8, follow-up was 3.7 with a bench mark of 4.9. Individual indicators that improved significantly were ace inhibitors given with hypertension; annual cholesterol/triglyceride, quantitative urine protein tests, and foot examination.

Conclusions: For population-based chronic disease programs to succeed, interventions that integrate measurement, feedback, and education to both the providers of care and those receiving the car must be used. Bench marking provides physicians with performance comparisons and the necessary cues to action for promoting improvement in quality indicators.

The Florida Medicare Managed Care Quality Improvement Project

F. Richards, III

Objective: To demonstrate the possibility for improvement in diabetic care.

Method: The Florida Medicare Managed Care Quality Improvement Project (MMCQIP) is a Health Care Finance Administration (HCFA) directed pilot ambulatory improvement project dealing with diabetic care. Five state Peer Review Organizations (PROs) including California, Florida, Minnesota, New York, and Pennsylvania and 23 Managed Care Organizations (MCOs) have been involved. Nine quality indicators were established to measure diabetic medical care: office visits, general prevention, eye care, foot care, blood pressure monitoring, renal function monitoring, lipid monitoring, glucose monitoring, and counseling. The Florida experience involved 3 MCOs, 36,000 patients with diabetes, 6,000 primary care providers, and a strong collaborative effort among the MCOs, HCFA, and Florida Medical Quality Assurance Inc. (FMQAI), the Florida PRO, over a 3-year timeframe. Three hundred medical records per plan were abstracted for the quality indicators to establish a baseline data set. Two interval remeasurements and a final remeasurement were performed after all the interventions had been implemented.

Interventions: A number of quality interventions were used including provider and patient education, quarterly reminders, and provider and office staff in-servicing. Materials such as office posters, patient diaries, chart stickers, and office flow sheets were also used.

Results: Opportunity for improvement was noted in all quality indicators. The final remeasurement focused on four core indicators that were consistent across all MCOs and all states.

Conclusions: Measurable improvement in diabetic care can be achieved when health agencies and health systems work cooperatively.

Learning Objective: Participants should be aware of the ability to improve the care given to patients with Diabetes mellitus.

The Impact of PPIP on Clinical Documentation of Patient Education

M. M. Smith, N. H. Gottlieb

Objective: To assess the impact of the implementation of Put Prevention Into Practice (PPIP) on the behavior of participating clinicians in relation to documentation of patient education.

Methods: Using chart audits, we conducted a baseline and a 3-year follow-up evaluation of the documentation of patient education for five clinics. Approximately 75 medical charts were abstracted from each clinic by a single registered nurse trained to collect the data according to set protocols. We focused on the five topics considered to be the leading behavioral causes of death (tobacco, alcohol, nutrition, physical activity, and sexual behavior). We then determined dichotomous scores for each patient and each topic that represented a documented assessment for high risk within the previous six months and corresponding documentation of counseling in response to that risk. We combined the five dichotomous scores for a final percentage score (Linked Patient Education Score [LPES]) for each patient. A site score was compiled by using the mean LPES. Chi squared analysis tested for a statistically significant association between LPES and Time.

Results: The mean LPES increased from 0.04 to 0.13, with a Kruskal-Wallis H test result of 66.211 (and a significance of P < 0.001). The percentage of charts with an LPES of greater than zero increased from 16.7% at baseline to 41% postintervention, with a Pearson chi squared of 67.028 (P < 0.001).

Conclusions: The PPIP sites provided quantitative evidence that implementation was related to improved patient education documentation.

Learning Objectives: Participants should be able to describe the compilation of the site LPES and to discuss the rationale for linking risk assessment to counseling in an evaluation of patient education documentation.

Developing an Osteoporosis Prevention Social Marketing Campaign Targeting Low-Income Young Mothers

A. Kay

Objective: To use existing data and formative research to develop an effective behavior change campaign.

Setting: Head Start programs and other collaborating agencies throughout Massachusetts.

Intervention: The Massachusetts Department of Public Health's Osteoporosis Awareness Program was initiated in 1993 to raise awareness and educate the public about osteoporosis prevention. The program initially targeted adolescents, mature women, and health professionals, and has expanded to include children, and men and women over 65 years of age. In 1998, the Massachusetts BRFSS data suggest that 81.65% of women aged 18–30 years are at risk of insufficient calcium intake, and nearly 70% report irregular or no physical activity. Focus groups of young mothers with children in Head Start programs explored language, priorities, and communication preferences. Based on these findings, a campaign to increase consumption of calcium-rich foods, and increase participation in moderate physical activity will introduce the concept of modeling behavior to promote the health of other family members. In-depth interviews will further probe perceived costs and benefits of desired behaviors, social norms, and stages of change. Perceived barriers will be addressed in preferred mediums targeting people with the greatest opportunity for behavior change. The initiative will be evaluated by tracking calls to the campaign's toll-free number, and with targeted precampaign and postcampaign surveys.

Conclusion: Formative research guides development of a targeted behavior change program.

Learning Objective: Participants should be able to discuss the social marketing process of behavior change, and the value of existing data and formative research in the development of a consumercentered campaign.

Eat Smart Move Smart—Applying Transtheoretical Change Theory and Social Marketing Where We Work

L. Larsen, M. Friedriechs, C. Chalkley, R. Thackeray, B. Neiger

Objective: To apply transtheoretical stage of change theory and social marketing concepts to improve physical activity and 5 a Day practices for employees of the Utah Department of Health.

Methods: The Social Marketing Opportunities Group in the department conducted surveys, focus groups, and interviews with those in preparation stage of change. A 10-week intervention was designed and conducted from May to August 1998, to meet the expressed needs of the targeted audience. We also did a health education intervention in a control group using generic physical activity and 5 a Day messages. A baseline survey was done and one-month and six-month follow-up surveys.

Outcome: There were statistically significant increases in the experimental group for moderate physical activity, fruit and vegetable consumption, movement from preparation to action stage of change, and perception of administrative support. In addition, there were long-lasting environmental changes. The Social Marketing Opportunities Group learned a lot and had a great time!

Conclusions: The theory-based intervention was more effective in reaching and helping the targeted audience change behavior compared with the "give them what you have without asking them what they want intervention."

Learning Objectives: Participants should be able to describe how to apply transtheoretical stages of change theory and social marketing concepts to deliver effective worksite physical activity and nutrition interventions and the rewards of helping health departments employees improve their health.

Take a New Path—Market Good Health!

D. McLean, J. Anderson, T. Doll

Objective: To build social marketing competencies among nutrition and physical activity educators in Michigan.

Setting: A one-day intensive training program at a centrally located conference center.

Intervention: Targeted audience needs assessment drove the development of a social marketing training program that brought nationally recognized social marketing experts to nutrition and physical activity educators from across the state. Presentations covered targeted audience profiling, use of focus groups, adaptation of marketing techniques to nutrition and physical activity issues, exchange strategies, and how to make health education fun, easy, and popular. A package of informational materials was developed and provided to participants for later reference. Participants completed a training program evaluation on-site and a six-month follow-up survey is planned to evaluate the usefulness and application of the training concepts in local programming.

Outcomes: The needs assessment indicated interest in social marketing, but little exposure to theory or practical applications in nutrition and physical activity education. In training program evaluations, participants reported comfort with social marketing concepts and their intentions to use audience profiling and exchange strategies in local programs. A six-month follow-up survey about usefulness of reference materials and application of social marketing concepts in community programs was developed and will be presented.

Conclusions: Social marketing training can increase programming competencies of health educators, motivate program changes at the local level, and potentially improve program effectiveness.

Successful Partnerships: Building and Working Partnerships

R. Adams, G. L. Edwards, J. L. Ware

Objective: To promote a positive healthy learning environment in elementary schools.

Setting: Southwest Utah public schools—K–5.

Interventions: The five-year project, "Paint a Healthy Body" is a partnership between the Southwest Health Department, schools, state and community agencies, local leaders, and businesses. Phase I includes organizing 5 communities, conducting assessments in 21 elementary schools, identifying schools and priority areas for intervention, and developing objectives and action plans for school year 2000.

Outcomes: All five communities were excited to participate. More than 400 faculty and administrative assessments were completed, identifying 14 priority schools. Assessments showed areas most needing attention were policy setting for physical activity, faculty training, and learning to use community resources. Subject areas needing more attention were physical activity and nutrition education.

Conclusions: This social marketing approach, assessing the targeted population before intervention, is unique in school interventions. Having the data available engaged both schools and community in the project. Even small lifestyle changes made by students and families will benefit the community as a whole.

Building Partnerships for Health: Lessons Learned From a Canadian Example of Intersectoral Collaboration

R. Labonte, S. Swanson, J. Feather, H. Cyr, M. Hooper

Objective: To describe lessons learned regarding the structures and processes that promote effective intersectoral collaboration.

Methods: The study was undertaken between January and June 1997. A descriptive chronology of the events of the intersectoral process for the development of the "Nutrition for Health: An Agenda for Action" was prepared using background materials and files. A series of semistructured interviews with 11 people who had been involved in the agenda's development followed, permitting divergence in opinion and frank expression of differing perspectives on the process. The interviews and descriptive chronology provided the basis for identifying key generative themes and questions for two story and dialogue workshops with 13 participants in Ottawa and 10 in Halifax. This method creates generalized knowledge about practice through a structured dialogue around related experiences. Participants had been involved in either the development of the agenda, Nova Scotia's nutrition action plan, or other intersectoral collaboration processes.

Results: Lessons learned were in the following key areas: preplanning for intersectoral collaboration, paying attention to power in building the partnership, securing partners' involvement by creating ownership of the product, following through on the action, and consulting constituencies.

Conclusions: Although lessons generated from this case example are consistent with recent literature on intersectoral collaboration, the study also affirms what many practitioners already know and suggests that we often fail to put it into practice.

Learning Objectives: Participants should be able to identify key components of effective intersectoral collaboration for creating healthy public policy.

Integrating Medicine and Public Health: The California Experience

N. Kohatsu, P. Porter, R. Chapman, P. Fox

Objective: To develop a program that could foster and support partnerships between the medical and public health sectors to improve the health of Californians.

Setting: The state of California.

Interventions: The California State Department of Health Services, in partnership with the University of California, San Francisco (UCSF), created the Integrating Medicine and Public Health (IMAP) Program. Program staffing is multidisciplinary with formal training and experience in public health, nursing, medicine, managed care, social work, and medical sociology. The IMAP Program has undertaken a survey to determine and disseminate best practices among medicine and public health (M/PH) collaborations. The program is also serving as a catalyst for M/PH partnerships as well as providing technical assistance in quality improvement, disease management, and aging.

Outcomes: More than 450 M/PH partnerships have been identified and analyzed. Features from successful collaborations and lessons from partnerships that fell short of expectations are being applied to optimize new and existing partnerships. The IMAP Program is involved in many projects including facilitating a regional public health and managed care partnership; conducting a statewide medicine and public health conference; developing and implementing a state and local community report card initiative led by the United Way; developing a state asthma plan and using an advisory group to guide action; and establishing a senior health management program with individual and population health components.

Conclusions: There is a large unmet demand from the medical, public health, and community sectors to partner more effectively to bring about improvements in population health status.

Learning Objectives: Participants will better understand the process of catalyzing partnerships between medicine and public health to improve the health of a population.

Helping Communities Learn How to Remove Barriers to Physical Activity

T. R. Johnson, R. B. Parr, K. A. Petersmarck, J. Chabut

Objectives: To teach communities in Michigan what can be done to remove barriers to healthful and safe physical activity, and to motivate communities to improve opportunities for citizens to become more active.

Setting: Michigan communities.

Interventions: A new statewide award system that recognizes communities who are taking steps toward making it easier and safer to become physically active is being pilot-tested in Michigan by the Governor's Council on Physical Fitness, in partnership with the Chronic Disease and Injury Control Division of the Michigan Department of Community Health. A comprehensive self-assessment tool has been developed, based on extensive research with national experts on pedestrian and bicycle safety, highway engineering, trailways development, mass transit, physical activity promotion, and school physical education. To complete the self-assessment process, communities pull together a work group including elected officials, transportation administrators, school board members, major employers, etc. Communities can earn one of five award levels, with progression up the awards ladder encouraged and facilitated by Regional Fitness Councils. Award recognition includes press releases to local media, as well as statewide recognition at a very prestigious statewide awards event with statewide media coverage.

Outcomes: It is anticipated that communities that apply for the active community award will become aware of realistic steps the community could take to help residents be more safe and healthy, and forge new partnerships among local groups to create a political base for making significant environmental changes. It is anticipated that the extensive media coverage generated by the awards process will increase public awareness and public motivation to move toward safer, healthier communities.

Conclusions: This new model for education and motivation will be a powerful force in removing barriers to physical activity in Michigan.

Learning Objectives: Participants will be able to name at least 15 steps that local communities can take to make it easier and safer for citizens to become physically active, and they will understand a model for rewarding and recognizing communities that are working toward facilitating physical activity.

A Dynamic University-Health Department Partnership: Put Prevention Into Practice in Texas

N. H. Gottlieb, M. M. Smith, P. Huang, P. Harper, P. Mathison

Objective: To present partnership characteristics of the successful long-term collaboration between the University of Texas (UT) and the Texas Department of Health (TDH).

Setting: The Kinesiology and Health Education Department at the University of Texas and the Bureau of Disease and Injury Prevention at the Texas Department of Health, Austin, Texas.

Interventions: Put Prevention Into Practice (PPIP) is a system change approach to increasing clinical prevention. A unique model for the diffusion of PPIP is the result of an ongoing partnership between TDH and the UT. We conducted an anonymous Internet survey of past and current team members to further understand the partnership dynamics.

Outcomes: Initially UT served as evaluator of TDH's implementation with nine clinical sites. Evaluation of implementation employed a combined methodological approach, consisting of semi-structured interviews and chart audits. Over time, UT's role changed from observer to action researcher. This increased collaboration between UT and TDH resulted in several procedural changes, development of implementation tools, and development of the model for diffusion of PPIP. This evolving model uses regional consultants who provide technical assistance and on-site trainings to public health sites throughout Texas. According to the members, the vision of the leaders and regular meetings were perceived as strengths of the partnership. A key identified barrier was bureaucracy times two.

Conclusions: Qualitative data were collected assessing partnership dynamics. An analysis of the barriers and strengths of this relationship may assist in future collaboration efforts between departments of large academic and public health agencies.

Learning Objectives: Participants should be able to apply knowledge of partnership stresses and strengths to their own setting, and consider new partnership possibilities.

Evaluation II Session 12

Thursday, December 2, 1999

Assessing the Impact of a Diabetes Awareness Media Campaign in Utah

V. Benner, B. Ralls, B.A. Larsen

Objective: To assess the change in knowledge, attitudes, and beliefs about diabetes among Utahns after one year of an ongoing statewide diabetes media campaign.

Methods: The Utah Diabetes Control Program (UDCP) added nine questions to the Behavioral Risk Factor Surveillance System (BRFSS) during April–June 1998 to collect baseline data on the knowledge, attitudes, and beliefs about diabetes before the initiation of a statewide media campaign. The questions were asked again during June–August, 1999 to assess changes in Utahns' beliefs as a result of the media campaign. The questions included perceived seriousness of diabetes, knowledge of symptoms and risk factors, ways to lower the risk of developing diabetes, and questions about personal risk of developing diabetes and whether respondents had had a blood test for diabetes.

Results: Preliminary results indicate that 81% of respondents believe that diabetes is a serious disease, but only one-third (34%) perceived themselves to be at risk of developing diabetes. Family history (29%), poor diet (19%), and obesity (16%) were the most frequently cited factors that increase the likelihood of developing diabetes (13% responded "Don't Know"). The most frequently reported signs or symptoms of diabetes were frequent thirst (17%), fatigue and tiredness(16%), and frequent urination (15%). More than 17% responded "Don't Know." Results from June–August 1999 are not available, but will be presented at the conference with a comparison of the results obtained in 1998.

Conclusions: Most Utahns believe that diabetes is a serious condition, but may not perceive themselves to be at risk. A significant percentage of Utahns don't know what increases the likelihood of developing diabetes or the signs and symptoms of diabetes.

Learning Objectives: The participant will be able to describe changes in knowledge, attitudes, and beliefs about diabetes as a result of the first year of an ongoing statewide media campaign.

Session 12 Evaluation II

Thursday, December 2, 1999

A Statewide Assessment of the Flu Campaign for People With Diabetes in South Carolina

A. C. Rafiroiu, L. Ellis, T. Aldrich, Y. Boateng

Objective: To assess the effectiveness of influenza vaccination promotion efforts to persons with diabetes in diverse populations in South Carolina during Life Preservers Flu Campaign, October 1998–January 1999.

Methods: A survey was conducted among 4,000 people attending influenza vaccination programs and clinics during the past flu season. The four regions of the state were represented as strata with further selection of two counties (one urban, one rural) in each region. Administration of the survey was randomized to provide independence between eight stratified regional locations selected. An analysis of influenza hospitalizations, emergency room visits, and mortality rates of persons with diabetes and vaccine usage rates in selected counties and during the campaign was pursued.

Results: The response rate for the survey was 75%, with an oversampling of people with diabetes. Most significant sources of information regarding flu vaccination were newspaper, radio, physicians, and family for whites and churches for blacks. Overall, whites had significantly more sources of information than did blacks. Rural regions experienced better vaccine coverage. No influenza deaths were reported statewide during the flu season. The analysis of diabetes morbidity based on mentioned sources is currently ongoing.

Conclusion: This evaluation of an influenza public health intervention is one of the first such efforts in South Carolina. The results will provide useful information about audience responses to educational messages, and to the channels that are effective for promoting public health actions. The specific impact of this national initiative can help tailor strategies for future health promotion interventions.

Learning Objectives: Participants should be able to describe components of an evaluation plan used to assess the effectiveness of influenza vaccination promotion efforts for people with diabetes in diverse populations in South Carolina. Participants should also be able to discuss how results of the Life Preserver Campaign can influence state and local health departments to deliver effective programs leading to better influenza immunization coverage among people with diabetes.

Evaluation II Session 12

Thursday, December 2, 1999

Evaluation of State and Local Tobacco Use Control Coalitions in Virginia

R. N. Graham

Objectives: To determine strengths and weaknesses of the coalitions formed under the ASSIST Project and to determine areas where technical assistance might be needed to move these coalitions into the new Centers for Disease Control and Prevention (CDC) Tobacco Control Program.

Methods: In 1997, an assessment was conducted using both a Coalition Assessment Tool and Key Informant Interviews. The tool was mailed to more than 300 people who were members of coalitions or had participated in coalition activities, and 163 surveys were returned for analysis. Key Informant Interviews were conducted with 21 coalition members in leadership capacities as well as with the tobacco use control staff. A document review of coalition minutes and program records was also used.

Results: The evaluation identified the primary reasons for coalition membership: fulfillment of job responsibilities, prevent young people from smoking, and the desire to make their community tobacco free. Primary barriers to membership identified included lack of time, lack of support from employer, and lack of coalition direction. Reasons given for active participation most often reported were sense of accomplishment, networking and interacting with others, and gaining access to new funding sources. Suggestions for improvement included recruitment of a more diverse membership, improved communication, better marketing strategies, increased resources, and a more defined coalition organizational structure. The technical assistance needs identified focused on training topics related to the suggestions for improvement.

Conclusions: The majority of respondents believed that their coalitions could be functional under the new CDC program if clear expectations were given.

Session 12 Evaluation II

Thursday, December 2, 1999

Decreasing Average Cost Across Output Levels in Public Health Intervention Programs: Evidence and Implications

E. Mansley, D. Duñet, D. May, S. Chattopadhyay

Background: The relationship between average cost and output level in public health intervention programs is not well understood. Nevertheless, it has important implications for program planning, cost forecasting, appropriation decisions, efficiency evaluation, and intervention policy. The purpose of this study was to gather insight into the behavior of average cost across output levels in federally-sponsored state-organized public health intervention programs.

Methods: Focusing on cancer detection programs sponsored by the Centers for Disease Control and Prevention (CDC), we modeled 19 state programs as productive processes and examined their average costs over a 2- to 5-year period of operation. We considered three alternative definitions of output: women served, screens performed, and conditions detected. Average federal costs and average total costs were estimated for each grant period and cumulatively.

Results: For all measures considered, average cost decreased as output expanded. Econometric estimates of the elasticity of period average total cost with respect to output ranged from -0.733 to -0.754. These results suggest that the minimum average cost possible for public health intervention programs probably varies with output level.

Conclusions: Results imply that differences in output level should be taken into account when comparing operating efficiency across sites; conclusions from societal cost-effectiveness analyses may depend on the level of output at which the programs are evaluated; planning and appropriation decisions may be suboptimal if cost projections do not take into account the decreasing behavior of average cost; and it may be more efficient to incorporate new or smaller programs into larger established ones.

Learning Objectives: Participants should acquire a stronger understanding of the relationship between output level and average cost in federally-sponsored state-organized public health intervention programs and be able to incorporate that understanding into the planning and evaluation of chronic disease programs.

Partnering With Regional and Local Health Departments to Implement Policy and Environmental Changes for Cardiovascular Disease

J. Smith

Objectives: To assist 60 local health departments and 8 Regional Texas Department of Health (TDH) offices in Texas to move toward population-based approaches for the prevention of heart disease and cancer.

Methods: There are 245 counties in Texas. The Texas Department of Health supplies state and federal funds to 60 participating local health departments. Regional TDH offices cover the remaining nonlocal health department counties. Staff and funding streams were identified to address cardiovascular disease (CVD) and cancer. Two training sessions per, as well as ongoing technical assistance on policy and environmental approaches for the prevention of CVD and cancer, were provided from 1997–1999. Yearly implementation objectives were submitted by local and regional offices. Activities were monitored through monthly and quarterly reports.

Results: Regional and local health department offices conducted 2,375 restaurant surveys, 459 worksite surveys, and carried out policy changes for tobacco-free restaurants, community restaurant guide brochures, local worksite wellness conferences, walking paths, walking support groups, educational campaigns, and Five A Day coalitions.

Conclusions: Training, technical assistance, and funding are essential in assisting sites to provide population-based approaches. Patience and communication channels are necessary tools in changing from one system approach to another, or to include another system approach into an already full agenda. Partnerships are important methods when covering a large state territory and can be most effective in reaching a diversified population.

Learning Objectives: Participants will be able to describe a system approach to adopting population-based strategies as a separate or enhanced part of the regional and local public health agenda to prevent cardiovascular disease and cancer.

The Social Reconnaissance: A Tool for Identifying and Addressing Community Health Disparities

M. R. J. Felix, J. N. Burdine, A. Abel, C. Wiltraut

Objective: To illustrate how the Social Reconnaissance process, a key component of the Health Resources and Services Administration's (HRSA) 100% Access and 0% Disparities Campaign, has identified factors limiting access to care and disparities in the health of underserved persons, and resulted in strategies that address those factors and disparities.

Methods: Grounded in the social determinants of health, the Social Reconnaissance is a process that combines quantitative and qualitative population health status assessment methods with community organizing principles and practices to identify resources, opportunities, and strategies for increasing community capacity for health status improvement. The process incorporates the health economics and marketplace characteristics of a local environment in the development of strategies that broker relationships with resource holders at the federal, state, and local levels.

Results: Since 1997, the process has been implemented in 25 underserved communities as part of a national campaign for 100% Access and 0% Disparities being advanced by HRSA's Bureau of Primary Health Care. Case study examples will be provided of specific health disparities and access issues that have been discovered among the near elderly, Hispanic Americans, and among politically complex environments such as communities that border two states. Strategies developed by communities to address those disparities and access issues as a result of the Social Reconnaissance will be provided.

Conclusions: The Social Reconnaissance process is a quick and effective process for identifying the health disparities that exist in communities, particularly communities that have diverse populations based on income, geography, or race and ethnicity. The products of the process are service delivery and financing mechanism strategies that can be implemented to improve access to care and resolve disparities in health status.

Learning Objectives: Participants will be presented with the elements of the Social Reconnaissance strategy for application in their own communities as a means to identify health disparities and subsequently develop approaches for addressing these disparities.

A GIS Tool for Public Health and Community Health Planning— Cardiovascular Disease (CHP/CD)

J. Nitzkin, R. Polster

Objective: To demonstrate the utility of a user-friendly software tool that will place geographic information system (GIS) capabilities, plus age, sex, race, and socioeconomic adjustment within easy reach of public health and community planning agencies.

Background: With the Centers for Disease Control and Prevention support, Engineering Management and Economics, Inc. (EME), has developed a prototype GIS software tool for public health and community health planning.

Results: This sophisticated, yet user-friendly desktop software will facilitate development of epidemiologically sound geospecific health status baselines and bench marks. By doing so, users will be able to project the potential benefits of various program options. This presentation will discuss the logic behind the design of the model and the potential utility of this approach at state and local levels. Output is in the form of tables and maps showing the distribution of cases, unadjusted and adjusted rates, and the statistical significance of the differences between the adjusted rates by geographic area and the selected baseline or bench mark.

Conclusion: The greatest values of CHP/CD will probably be its ability to help generate more convincing budget requests, then track the progress of programming, once implemented.

Learning Objectives: Participants will learn about a new approach to develop health status baselines and bench marks for preventive cardiovascular disease programming, and also about a software tool currently under development to put these capabilities within easy reach of all potential users.

Food on the Run, Using Advocacy to Promote Healthy Eating and Physical Activity

A. Purcell, P. Agron

Objective: To train local community leaders and high school students to identify and change policies that have a detrimental effect on adolescent nutrition and physical activity behaviors.

Setting: California High Schools.

Intervention: Because of the high rate of obesity and physical inactivity among California teenagers, the California Project LEAN high school advocacy program was created. This multilevel intervention seeks to create policies at the school, community, and state level that increase the number of healthy eating and physical activity options for low-income high school students. Groups of low-income students across the state are trained in the basics of nutrition, physical activity, and advocacy, and they are mobilized to achieve policy change.

Outcome: Educational materials, including a policy tool kit, were created to guide the students through the advocacy process. Students have been successful in making healthier food choices from vending machines and cafeterias and in increasing the number of noncompetitive physical activity options on campus.

Conclusion: High school students can play a crucial role in the development of school policies related to nutrition and physical activity. Policies are enacted that are acceptable to the adolescent population and have a greater chance of achieving behavioral change.

Learning Objectives: Participants will be able to identify rationales, strategies, and tools for using an advocacy approach to healthy eating and physical activity promotion in the high school environment.

Communicating the Individual, Social, and Economic Burden of Chronic Diseases Among African Americans

J. Jackson-Thompson. E. J. Simoes, J. A. Vradenburg, A. Lock, T. Murayi, P. Akinbola

Objectives: To implement a mechanism for disseminating minority-focused surveillance information, especially to the general public and direct efforts toward improving the health status of Missourians and reducing disparities.

Methods: This project used data from a 1996 Missouri Department of Health's (MDOH) BRFSS-based telephone survey targeted in one rural and two urban areas with a high proportion of African Americans. Published monographs address the prevalence of diabetes, arthritis, and functional limitation; and cardiovascular disease (CVD) risk factors and trends. Future publications will focus on cancer screening practices. Monographs were mass mailed to state legislators, Minority Health Alliances, physicians, hospital administrators, and advocacy groups. Findings, tailored to locality, were presented to coalitions, health professionals, public health advocates, and the media.

Results: These data have been used by MDOH and other agencies in federal grant applications and program planning. Mass mailings and presentations have led to numerous requests for further information. Presentations attended by a diverse mix of interested parties have provoked discussions centered on establishing collaborative efforts, especially with community leaders and providers. Project history demonstrates the difficulty in communicating scientific data to nonhealth professionals, and the need for more inclusive planning that will ensure an easily intelligible, pertinent, and consistent data source.

Conclusions: Policymakers, planners, program managers, etc., often lack substantive information from which to plan and implement health promotion programs, while advocacy groups and the public are often underinformed. By, in an easily understood manner, highlighting policy issues and the potential of delineating populations for targeted interventions, this project has decreased informational deficiencies.

Learning Objectives: Participants should be better able to discuss how state health departments can use available data by producing an easily understandable, yet comprehensive, source of health-related information, and they should be able to discuss how state health departments can consistently provide pertinent information to legislators, interested parties, and the public.

Personal Energy Plan (PEP): New Look for a New Audience in Worksite Promotion

N. Kerr

Objective: To revise and disseminate intervention materials from a demonstration program to promote healthy eating and physical activity based on evaluation results.

Setting: Five diverse worksite settings in four states representing 15,000 employees in both white-and blue-collar occupations.

Interventions: The Centers for Disease Control and Prevention (CDC) developed and piloted a 12-week, self-directed program targeting two Stages of Change: Contemplators and Preparers for healthy eating and physical activity. Based on social marketing principles and consumer research, the program included stage-specific kits including quizzes, tip sheets, steps to success, and calendars for motivation and goal setting. To assist program coordinators in implementation, a Coordinator's Guide, Worksite Audit, and Activity Logs were provided. Each worksite in the pilot program supplemented the kit with activities and incentives tailored to their employees' needs.

Results: This presentation will present the evaluation results (showing significant forward movement among Contemplators and Preparers) and describe how they were used to revise the program. It will also describe the partnership developed between CDC and The Cooper Institute for Aerobics Research to redesign and disseminate the materials, and detail the next steps in this program.

Conclusions: Evaluation data show that self-directed intervention materials, specifically targeting select segments of the population, are in demand by worksite health promotion personnel and can be effective in producing desired behavior change among Contemplators and Preparers.

Learning Objectives: Participants will be able to describe the future plan for PEP program evaluation and dissemination. Participants will understand the application of evaluation results from a demonstration project.

Getting the Message Across: The Importance of Media and Partnerships in Disseminating Diabetes and Flu-Shot Messages in Oklahoma

R. Brewer, M. Page

Objective: To assess the extent to which the media and partnerships were able to deliver diabetes and flu-shot messages in Oklahoma from October 1998 to March 1999.

Methods: Diabetes and flu shot public service announcements developed by the Centers for Disease Control and Prevention (CDC) were distributed to media stations in Oklahoma. Media stations were contacted by telephone and encouraged to use public service announcements. Prospect Associates tracked public service announcement use to determine audience reach and frequency of message delivery. Partnerships were formed with health-related organizations to encourage dissemination of diabetes and flu-shot messages via brochures, posters, and organization newsletters.

Results: Diabetes and flu-shot public service announcement were aired 1,998 times at 18 stations in Oklahoma. Sixty-two print stories were circulated with an estimated reach of 3,317,016 people. Approximately 55,900 English brochures and 1,414 posters were distributed to partners. Campaign partners such as the Oklahoma Office of Rural Health reached approximately 12,000 physicians, nurses, and businesses with their October newsletter. Other partners, such as the Oklahoma Foundation for Medical Quality reached 3,500 Medicare beneficiaries with their fall 1998 newsletter.

Conclusions: Media and partnerships play important roles in delivering diabetes and flu-shot messages.

Learning Objectives: Participants should be better able to discuss the value of media and partnerships in delivering diabetes and flu-shot messages to large audiences.

Walk Texas! Health Provider Guide for Physical Activity

R. Atwood, N. Gottlieb, N. Stancic, G. Sneden, J. Hitt

Objective: To provide primary health care clinicians with a standardized tool that will allow them to quickly and successfully assess, counsel, and refer clients for physical activity.

Setting: Five family practice clinics in San Antonio, Texas.

Intervention: The Walk Texas! Health Provider Guide for Physical Activity was developed through a coordinated effort of the Texas Diabetes Program/Council, the Texas Department of Health, and the University of Texas at Austin. The guide is currently being piloted at five clinics to evaluate the effectiveness and utility of a standardized tool in increasing clinician assessment, counseling, and referral for physical activity in the primary health care setting. Assessment and counseling protocol is based on the transtheoretical theory and providers are encouraged to partner with community groups for physical activity program referral. The Walk Texas! Health Provider Guide for Physical Activity is being integrated with Put Prevention Into Practice to combine resources and ensure greater success.

Outcomes: Data on implementation and one-group only chart audit data on assessment and counseling for physical activity will be presented.

Conclusions: Current research shows that physical inactivity is a major risk factor for cardiovascular disease and many other chronic diseases. The physician can play a major role in assessing and counseling patients for physical activity, although few evidence-based interventions have been tested. The need for physical activity interventions in the primary care setting is crucial to assist patients with making positive changes toward a more physically active lifestyle.

Learning Objectives: Participants should be able to discuss the major components and effectiveness of a standardized tool for the assessment, counseling, and referral of physical activity by health care providers.

Poster Sessions

Blood Pressure Patterns Among Omani Population

A. A. Hasab, A. Jaffer, Z. Hallaj

Objective: The National Blood Pressure Survey was carried out with the aim of determining the level of blood pressure among Omani Population 18 years and above, studying the epidemiological factors most related to blood pressure and carrying out a program for the management and control of hypertension in the Sultanate of Oman.

Material and Methods: The study was essentially a cross-sectional approach. It was carried out on a representative sample selected by the multistage stratified random procedure. Basic data such as age, address, level of education, occupation, family size, and income per month were collected. Personal habits, such as smoking, usual and leisure physical activity were determined family history of diabetes; strokes, and hypertension were collected. Certain anthropometric measurement as height and weight were assessed. Blood pressure was measured at least twice and the mean of each was calculated and recorded.

Results: Of the 4,732 persons screened, it was possible to identify 1,278 (27.01%) people with high blood pressure. A significant positive correlation between both systolic and diastolic blood pressures was observed. There was also a positive correlation between both systolic and diastolic blood pressures with age, body mass index (BMI), and diastolic blood pressure with income per capita. Multiple regression analysis showed that blood pressure depends on age, BMI, and income per capita. There is an increased risk of hypertension among males, persons aged 45 years and over and those of sedentary occupational and leisure physical activity. Higher risks were also observed among widows and divorced women and those below preparatory level of education. Studying the epidemiological variables related to hypertension simultaneously in a logistic regression model, adjusted risks associated with obese persons, and those aged 45 years and over were significantly increased compared with the relevant different categories.

Conclusion and Recommendation: The result of the National Blood Pressure and Coronary Heart Disease Survey shows that prevalence rate of the disease is approaching that of western countries. Obese Omani persons and those aged 45 years and over were at an increased risk of developing hypertension. There is a need for developing and carrying out a national plan of action for management and control of hypertension in the Sultanate of Oman. The plan should be a component of the national health care system designed for health protection and promotion of the general population and within the PHC strategy.

Chronic Disease Director Policy Advocacy at the Public Health Worksites: Implementation of March Into May

F. Bright, E. Sternberg, B. Leonard

Objective: To implement and institutionalize a 10-week incentive-based physical activity behavior change program (March Into May) for public health department employees, with a long-term goal of diffusing intervention into community.

Setting: Twelve state health departments.

Intervention: March Into May (MIM) was created and diffused by the National Coalition for Promoting Physical Activity. The successful implementation of MIM required a policy decision by public health management to support employee intervention infrastructure development and participation. MIM required management participation and promotion; a team structure; the accumulation and distribution of incentives; data collection and program evaluation. Chronic disease director's played a significant role in policy advocacy.

Results: Twelve state health departments implemented programs with an average participation rate of 42%; 8,471 total participants; 65% participant goal completion; and 80% moving from contemplation forward, 64% moving from participation forward, and 33% moving from action to maintenance.

Implications: For health departments to credibly carry out community health promotion they should provide institutional modeling. Chronic disease directors can model influencing decision makers for this policy change for community change agents.

A Computer-Tailored Maintenance Intervention to Promote Long-Term Adoption of Cardiovascular Disease Risk-Reducing Behaviors

A. Jacobs, A. Ammerman, B. Garcia, W. Rosamond, K. Tawney

Objective: To develop and test an innovative maintenance program that assists older, low-income women at high risk for cardiovascular disease with improving and maintaining changes made in the WiseWoman program.

Setting: North Carolina health departments.

Interventions: Twenty-two health departments that participated in the WiseWoman nutrition and physical activity intervention were randomly assigned to treatment groups: Maintenance Intervention (n = 11) or Maintenance Usual Care (n = 11). During the one-year maintenance phase, participants in Maintenance Intervention (n = ~500) will receive six nutrition and physical activity mailings and two prompted telephone calls from health department staff. The mailings and telephone calls are computer-tailored to participants' demographic, psychosocial, and behavioral factors, assessed by telephone interview. The Maintenance Intervention efficiently reinforces the initial WiseWoman program, requiring less time and effort from health department staff, and promotes greater use of behavioral and relapse prevention skills. Participants in Maintenance Usual Care (n = ~500) will receive standard care from their health departments.

Outcomes: To test the effectiveness of the intervention, we will compare changes in cholesterol, blood pressure, and body mass index; diet and physical activity scores; and changes in knowledge, attitudes, and beliefs between participants receiving Maintenance Intervention and Maintenance Usual Care. Acceptability and feasibility of this maintenance approach will also be evaluated among study participants and health department staff. We will present baseline data on physiologic, behavioral, and psychosocial measures.

Conclusions: Computer-tailored interventions offer promise as an effective and cost-efficient maintenance strategy that can be carried out in a busy health department setting.

Association Between Periodontal Disease and History of Heart Attack in the U.S. Population

S. J. Arbes Jr., G. D. Slade, J. D. Beck

Objective: To assess the association between the extent of periodontal disease and the self-reported history of heart attack in the U.S. population.

Methods: Data for people aged 40 years and older who underwent a periodontal examination and provided information on heart attack were obtained from the third National Health and Nutrition Examination Survey (N = 5,564). The outcome was the self-reported history of heart attack (yes vs. no). The main independent variable was the percent of periodontal sites per person with attachment loss of 3 mm or greater (categorized as 0%, >0-33%, >33-67%, and >67-100% of sites). Periodontal attachment loss was measured at two sites per tooth in randomly assigned half-mouths, one upper, and one lower quadrant.

Results: Relative to the 0% attachment loss category, the unadjusted odds of heart attack increased with each higher category of attachment loss-odds ratios were 2.2 (95% confidence interval = 1.3–3.8), 5.5 (3.4–9. 1), and 9.8 (4.5–21.0), respectively. Adjustment for age, sex, race, poverty, smoking, diabetes, high blood pressure, body mass index, and serum cholesterol attenuated these odds ratios to 1.4 (0.8–2.5), 2.3 (1.2–4.4), and 3.8 (1.5–9.7), respectively.

Conclusions: Among the U.S. population, the odds of having a history of heart attack increases with increasing extent of periodontal attachment loss. This cross-sectional study provides support for the hypothesis that periodontal disease is associated with coronary heart disease.

Learning Objective: Participants should be better able to quantitatively describe the association between periodontal disease and heart attacks among the U.S. population.

The Relation Between Childhood Abuse and Smoking Persistence Among Adults With Smoking-Related Diseases

V. J. Edwards, R. F. Anda, V. J. Felitti, D. F. Nordenberg

Objective: One of the strongest predictors of smoking cessation is being diagnosed with a smoking-related disease. Therefore, we assessed the role of adverse childhood experiences in the persistence of smoking behavior among adults with smoking-related illnesses.

Methods: We surveyed 14,494 adult Health Maintenance Organization members attending a preventive health clinic in 1995–1996 on a variety of childhood background factors including abuse and family dysfunction as well as current health status and behaviors. The response rate was 70.5% (9,508/14,494). We compared respondents by smoking status (current smoker vs. nonsmoker) for conditions such as heart disease and chronic lung disease and symptoms of these illnesses. Using logistic regression, we calculated the risk (adjusted odds ratio) of current smoking by type of reported childhood abuse.

Results: Respondents who reported childhood abuse or witnessing maternal battering had an increased odds (between 1.4 and 2.2) of current smoking despite the presence of serious chronic disease conditions.

Conclusions: These data demonstrate the need for physicians and other health practitioners to assess underlying psychosocial factors that may impede smoking cessation among those persons at highest risk of death caused by smoking-related illnesses.

Learning Objective: Participants should be able to understand the role of adverse childhood experiences on the continuance of smoking behavior despite the presence of chronic disease conditions.

Building Public-Private Coalitions to Promote Employee Health Promotion Activities in California

P. K. Goel, J. Carmen, W. Shoemaker

Objective: To identify ways for improving adoption of Employee Health Promotion (EHP) activities in California.

Methods: We conducted a statewide telephone survey of California firms. The response rate of 33% was typical for the surveys conducted in this sector. We weighted our analysis by size, location, and type of firm.

Results: Only 12% of the firms currently offer any EHP programs. Injury prevention (78%), referral to community hotlines or programs (67%), and discounts for health clubs or gyms (66%) were most commonly offered. The estimated median cost of EHP programs per employee per year was \$50. The major barriers reported were lack of budget (51%), employee interest (45%), and lack of knowledge (44%). The major helpful strategies identified were tax incentives (76%), guidelines of statewide and community resources (73%), and alliances of companies to pool resources and expertise (57%). Seventy-nine percent of the firms cited human resources departments (HRD) as the entity very influential in starting an EHP program. We used these results to build coalition with the statewide association of directors of HRD for implementing EHP programs.

Conclusions: Despite its relatively low cost, workplace still remains relatively unused for health promotion activities. This could be improved by building coalitions between state health departments and the entities seen as influential in starting an EHP program such as HRD.

Learning Objectives: For the EHP area, participants should be able to identify current barriers potential strategies, and potential entities for building coalitions.

A Web-Based Inventory of Public Fitness Trails in Texas

E. Graves

Objective: To pinpoint areas in need of trail development, to inform the public about existing fitness trails, and to address the omission of *Healthy People 2000* Objective 1.11 from *Healthy People 2010*.

Intervention: The Texas Department of Health (TDH) created the Texas Trail Registry, a web-based inventory of public walking, jogging, biking, and hiking trails. In Spring 1999, the TDH formed a review panel consisting of the National Parks Society, the Texas Parks and Wildlife Department, the Texas Department of Transportation, the Texas Trails Network, the Texas Physical Activity Network, and The Cooper Institute for Aerobics Research. This group provides guidance in each step of registry development. More than 1,100 trail interest groups, parks and recreation departments, sport clubs, and other trail users were asked to complete a brief web-based questionnaire about trails with which they are familiar. The information from submitted questionnaires is transferred to an active database. Trail information that is of interest to the public is accessible on the Web site in a region-specific format.

Outcomes: The registry has resulted in better targeting of trail-building efforts, increased promotion for existing trails, and better coordination among groups involved in trail development, enhancement, and promotion.

Conclusions: The Texas Trail Registry demonstrates that *Healthy People 2000* Objective 1.11 can be measured, thus it should be included in *Healthy People 2010*.

Learning Objectives: Participants should be better informed about methods by which trails and other supportive environments for physical activity can be catalogued in a format that is useful to both professionals and the public.

An Assessment of Public Restaurants in the Areas of Nutrition and Tobacco in Texas

M. Guzman, M. Reyes

Objective: To obtain baseline data for the state of Texas regarding nutritional offerings and tobacco policies in food establishments.

Methods: A restaurant survey tool was developed and piloted in summer 1997. Revisions were made, and a system was set up to disseminate and collect future surveys using local and regional health department staff. A total of 2,375 surveys were completed and returned for data compilation and to establish the baseline for fiscal year 1998.

Results: From our fiscal year 1998 baseline assessment, 24.5% of the food establishments surveyed reported following the 1990 Food and Drug Administration Guidelines for healthy menu offerings, 36% reported being a completely tobacco-free establishment, 52.5% offered to prepare meal items using a lower fat method (grilling vs. frying, poaching vs. sauteing, etc.), and 52.5% offered half or reduced portions of menu items at the customer's request. A total of 26 local health departments created local area dining guides that presented the nutrition and tobacco data gathered in the survey in a more customer-friendly format. These guides were distributed to local, city, and county populations by various dissemination methods.

Conclusions: These data provided a baseline to gauge progress in the area of environmental change in food establishments. Additionally, continued use of the restaurant survey by local health departments can lead to the direct development of valuable tools that aid the public in making dining decisions in relation to chronic disease development and health status.

Hospitalization of Patients With Heart Failure: National Hospital Discharge Survey, 1985–1995

G. Haldeman, J. Croft, W. Giles, A. Rashidee

Objective: To describe national trends in hospitalizations with heart failure for men and women and trends in discharge status following hospitalization.

Methods: The number and prevalence of hospitalizations, procedure use; and discharge outcomes for men and women aged 35 years hospitalized with heart failure were estimated from National Hospital Discharge Survey data for the years 1985–1995.

Results: In 10 years, the number of hospitalizations increased from 577,000 to 871,000 for a first-listed diagnosis and from 1.7 to 2.6 million for any diagnosis of heart failure. Almost 78% of men and 85% of women hospitalized with heart failure were aged 65 years. Among persons hospitalized with any diagnosis of heart failure, in-hospital mortality decreased from 1985 to 1995 and prevalence of discharge to long-term care increased. Men had twice the prevalence of invasive cardiac procedures as did women during hospitalization.

Conclusions: The growing burden of heart failure can be expected to increase during the next decade unless innovative interventions and primary and secondary prevention strategies are implemented.

Learning Objectives: Participants should be able to describe the trends in heart failure hospitalization and the strategies to prevent rehospitalization.

Physical Activity Promotion: An Assessment of Walking Trail Usage in Urban and Suburban Communities

C. Blair, M. Swingle, R. Houseman, R. Brownson

Objectives: To evaluate the usage of walking trails in the St. Louis area and compare the data with that of current research on walking trail usage in the Ozark and Bootheel regions of Missouri, use these data to improve existing trails, and determine methods to promote walking and policy change.

Setting: Three urban and three suburban St. Louis community trails.

Methods: Four walking trails will be evaluated in summer 1999, three in urban communities and three in suburban communities. We will obtain cross sectional data on trail usage by interviewing adult walkers as they walk on the trails. Interviews are expected to last five minutes on average. The variables to be investigated include walking and exercise behavior, aspects of trail usage, and physical activity policy. Additionally, we are assessing predictors of walking such as age, sex, race, and socioeconomic status.

Outcomes: We predict trail usage will be higher in suburban communities than in both urban and rural communities. Additionally, trail usage will be higher among women than men, whites than minorities, and high-socioeconomic status than low-socioeconomic status.

Learning Objectives: Participants should have an increased knowledge in the importance of the evaluation of policy and environmental interventions, which are currently minimal. Participants should have an increased knowledge of measures and interventions to implement in the future of policy and environmental programs related to physical fitness and walking behavior.

Aging and Growth of Population as Contributing Factors to Increasing Chronic Disease Mortality in Canada, 1971–2010

Y. Mao, L. S. Mery, C. Waters, R. M. Semenciw

Objective: To develop methods to attribute ongoing increases in chronic disease mortality to changes in three factors: population growth, age structure, and the annual death rate over time.

Methods: Data were acquired from the Canadian Mortality Database managed by Statistics Canada. Estimates of future deaths were modelled by assuming a Poisson distribution. Using 1971 as a baseline, the proportion of deaths attributed to each of the three factors above was estimated.

Results: Changes in age structure accounted for the largest proportion of increased mortality. Males and females exhibited similar patterns.

Conclusions: The residual impact of changes in rates was low relative to that of aging and growth of the population.

Learning Objectives: Participants should be able to describe the effects of population aging and growth on increasing chronic disease mortality and to discuss potential applications of this model in proactively evaluating the relative effectiveness of targeted control programs both through timing and intensity of resources.

Collaborative Program for Smokeless Tobacco Education and Prevention

K.V. Rankin, D.L. Jones, L. Holyfield

Objective: To create a statewide collaborative program to reduce or eliminate smokeless tobacco use. This project was funded by the Texas Cancer Council.

Setting: State of Texas.

Interventions: Because numerous smokeless tobacco (ST) prevention and education initiatives were being pursued by various agencies within the state, the Spit Tobacco Prevention Network (STOPN) was created to draft a strategic plan and attendant action plans for coordination and collaboration among these projects. STOPN represents a diverse group of agencies and people, with different perspectives, experiences, targeted audiences, and resources. Phase I of the STOPN plan was an evaluation of knowledge, attitudes, and beliefs about ST collected from physicians, dentists, nurses, coaches, agricultural extension agents, drug enforcement officers, teachers, and young people themselves.

Outcomes: The STOPN strategic plan was published in April 1997. Data from the survey of potential education providers and models of ST behavior is being used in the creation of the pilot community intervention modules, which will be modified for statewide distribution.

Conclusion: The STOPN plan is designed to reduce ST use by providing education at many levels via integrated and coordinated approach. Unique in its interdisciplinary design, STOPN partners believe that through integration and collaboration, ST's negative economic impact and adverse effect on Texans' health can be reduced.

Learning Objectives: Participants should be able to describe the process and outcomes of the creation of a collaborative group to reduce and eliminate spit tobacco use and the plan for intervention in the pilot communities.

Enhancing Screener's Compliance With Education About Breast-Self Examination (BSE)

K. Rowley, M. Arce-Larreta

Objectives: To educate women about breast examination techniques and to enhance screener's compliance with education about BSE.

Sample Characteristics: The targeted population are Utah clients that have had a clinical breast examination. Therefore the sample includes patients with breast only and full examinations (breast and pelvic examinations), excluded from this study are women that had only pelvic/Pap examinations.

Method: Preevaluation and postevaluation of data. Tools to enhance screener's compliance were a personal letter addressing the number of clients examined by the screener along with the number of clients who did not receive and did receive BSE education, personal telephone call, pamphlets and brochures from the American Cancer Society and National Cancer Institute about BSE techniques. Data were obtained from the enrollment form, where the screener answers a yes or no to the question *Was BSE taught*?

Results: A preevaluation of data from August to October 1998 showed that 1,301 women have been screened. From these, 90 women did not receive education about BSE (7%). From these, four were female screeners and five were male screeners. Every noncompliant screener received a letter, a telephone call and educational pamphlets, as well as recommendations to encourage teaching BSE. A postevaluation from February to April 1999 showed that 1,420 women had been screened. From these, 51 women did not receive education about BSE (3.5%); a reduction of 50% from the preevaluation.

Conclusions: The personal letter and a telephone call along with the brochures about BSE were appropriate interventions to enhance screener's behaviors teaching clients about BSE techniques.

Learning Objectives: Participants should be able to discuss intervention and tools that can increase screener's compliance educating clients about BSE techniques.

Purpose of reinforcement of screener's compliance: It is to provide the client with the expertise and the knowledge of knowing their own breast with the ultimate goal of reducing breast cancer morbidity and mortality.

Productivity and Economic Costs of Diabetes in Oklahoma

D. Smith, M. Page, V. Valdmanis

Objective: To test and measure the burden of diabetes on income, general health status, disability days, access to care, health insurance, and unemployment.

Methods: Using the Oklahoma Behavioral Risk Factor Survey (BRFS), we successfully matched 400 (95%) of the 425 persons with diabetes in the sample with controls. We report rates for persons with diabetes and controls with the sign test to assess significance of differences.

Results: Median income was \$15,000–\$20,000 among persons with diabetes compared with \$25,000–\$35,000 among controls (P < 015). Among persons with diabetes, 21% needed a physician and could not pay vs. 11% for controls (P < 0.001). Persons with diabetes without health insurance coverage were 16%, vs. 11% for controls (P < .001). Unemployment among persons with diabetes was 33%, vs. 9% for controls (P < .001). Among persons with diabetes, 20% rated their overall health status as excellent or very good 30% rated it good, and 50% fair or poor, compared with 41%, 37%, and 22%, among the matched controls (P < .001). Among persons with diabetes, 47% had one or more disability days in the last month due to poor physical health and 20% had 30 disability days, vs. 23% and 6% for controls.

Conclusions: Diabetes significantly reduced productive activities for Oklahoma residents afflicted with the disease. Persons without diabetes had better health status, fewer disability days, more health insurance coverage, better access to a physician, and larger incomes.

Learning Objectives: Participants should know the impact of diabetes on the economic activity of persons with diabetes in Oklahoma.

Prevalence of Arthritis and Other Rheumatic Conditions, Alabama, Hawaii, Louisiana, New Jersey, and Rhode Island, 1997—Results From the Behavioral Risk Factor Surveillance System

F. Mili, C. G. Helmick

Objective: To describe the state-specific prevalence of arthritis and other rheumatic conditions.

Methods: We analyzed data from five states using the arthritis module in their Behavioral Risk Factor Surveillance System (BRFSS) in 1997. We used SUDAAN statistical software to account for the complex sample survey design.

Results: Among these five states using the arthritis module in 1997 (n = 10,510), the prevalence of chronic joint symptoms (i.e., pain, aching, stiffness, or swelling in or around a joint on most days for at least 1 month during the past 12 months) ranged from 15.5% to 24.3%. The prevalence of activity limitation attributed to chronic joint symptoms ranged from 6.1% to 11.5%. Among 41.7% to 65.0% persons who had arthritis diagnosed by a physician, 38.3% to 53.1% did not know their type of arthritis and only 42.8% to 49.4% were currently being treated by a physician. Data from states using BRFSS in 1998, not available at this time, will be presented, as well as trend during the time period 1996 through 1998.

Conclusions: The prevalence of arthritis, arthritis-related disability, and treatment for arthritis vary by state. The prevalence of arthritis is close to that previously reported in 1996. The BRFSS provides readily available data to assist state health departments, Arthritis Foundation Chapters, and others in targeting arthritis prevention and control efforts.

Learning Objectives: Participants should be able to describe the prevalence of arthritis, arthritis-related disability, and groups less likely to know their arthritis type or to receive treatment for their arthritis.

Creating Opportunity Through Public Policy and Legislative Reform

J. Newman, M. Tan

Objective: Using the Maryland Senate Bill 650, as an example of a policy model to obtain sustainability of community health workers.

Methods: Maryland Medicaid recipients are automatically enrolled in HMOs that coordinate health care for the Medicaid recipients. HMOs have been only moderately successful in reaching the targeted population, which cannot effectively gain access to services. Working together with state government, state legislators, and community health workers, we were able to modify Maryland law regulating HMO participation in Medicaid programs to require HMOs to submit plans for outreach to underserved patient populations. If the HMOs cannot comply with their plans for outreach, community-based organizations, with community health workers, can contact the Maryland Department of Health and Mental Hygiene to provide the outreach services. Bill 650 gives an opportunity for community health workers, who can help HMOs reach the underserved populations, to sustain themselves by providing the services that HMOs need. Bill 650 also encourages HMOs and other organizations to recognize the value of community health workers and creates a market for their services.

Results: Senate Bill 650 was passed by the Maryland Assembly, which created the opportunity for community health workers to sustain their programs by providing a necessary service for HMOs.

Conclusions: By using legislative reform, opportunities for jobs, provision of health care to underserved populations and sustainability can be created for community health workers.

Learning Objectives: Participants will understand the importance of public policy, how to work effectively with state legislators, and how to assist and empower community health workers and their programs in the legislative process.

Perceptions of Women Regarding the Accuracy of Mammography

M. Platt, D. Wilson, B. Zoller

Objective: Given the implications of false-negative mammography results, this study was conducted to determine women's perceptions regarding the accuracy of mammography.

Methods: A survey was conducted at a large academic medical center to better understand women's perceptions of the accuracy of mammography. A convenience sample (n = 200) of women having a mammogram at one of four clinical sites participated in the study. Women at each site completed the study questionnaire preceding their mammograms.

Results: Demographic data show the sample to be mostly married white (50%) or African American (34%) women with a high school education. Analyses indicated that the majority selected mammography (64%) when asked "what do you think is the most accurate method for detecting breast cancer". In response to the statement "if a mammogram is normal there is no breast cancer present," 23% agreed with the statement and 40% disagreed. However, in response to the statement "mammograms always find cancer if it is present," the sample was almost evenly split with approximately one-third of the sample agreeing and one-third disagreeing.

Conclusions: These data demonstrate that while women perceive that mammography is the most accurate method for detecting breast cancer, nearly an equal number think that the presence of a breast cancer tumor will always be visible on a mammogram as those who don't. These are important findings given that a false-negative mammographic finding may delay appropriate care if an abnormality exists.

Learning Objectives: Participants will be more informed about patient perceptions of the accuracy of mammography, and they will have increased awareness of the need for fully educating women about mammography and the importance of follow-up care.

Tracking Participants for 3 Years in a State Health Department Physical Activity and Nutrition Program

L. Wolfe

Objective: Tracking 817 participants who participated in the physical activity and nutrition program for three years.

Setting: State health department worksite office, field offices, veterans' homes and hospitals.

Interventions: The New York State Department of Health sponsored a physical activity and nutrition challenge for three years modeled after the 1996 CDC Director's Challenge and the National Coalition for Promoting Physical Activity's March Into May initiative. This program is a ten week goal orientated, team based, incentive program. This presentation will focus on results from a core group of 817 people who participated in this program all three years.

Outcomes: The data demonstrates the New York State Department of Health employees who participated all three years had higher physical activity, and fruit and vegetable consumption rates than employees who participated for one or two years. The program achieved 43% of the employee population in 1997, 28% in 1998, and 20% in 1999. The presentation will document short- and long-term gains from doing the challenge one time a year for three years.

Conclusion: Starting the program every year has shown to improve physical activity and nutrition levels among the core group, but levels reduce to their original state by the start of the program the following year.

Cigarette Smoking-Attributable Mortality and Years of Potential Life Lost, Colorado, 1997

H. Xiang, M. Leff, K. DeLeeuw

Objective: To estimate the impact of cigarette smoking on mortality and years of potential life lost (YPLL) in Colorado.

Methods: Using the Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC 3.0) software, we estimated smoking-attributable Mortality (SAM) and YPLL. Number of deaths from neoplastic, cardiovascular, respiratory, and pediatric diseases associated with cigarette smoking in 1997 was estimated. The 1997 mortality data, 1997 Behavioral Risk Factor Surveillance System (BRFSS) data, and the 1997 Pregnancy Risk Assessment Monitoring System (PRAMS) data were used for this report. The YPLL to age 65 years and to life expectancy were calculated using standard methodology, and SAM and YPLL rates were age adjusted to the 1980 U.S. population to allow comparisons.

Results: During 1997, 25,606 deaths were identified among Colorado residents. It is estimated that 4,616 (approximately 18% of all deaths) were attributable to cigarette smoking. About 25% of cancer deaths, 26.3% of cardiovascular diseases deaths, and 57.3% of the respiratory diseases deaths were attributable to smoking. Overall, approximately twice as many deaths occurred among males as among females. Cigarette smoking resulted in 10,594 YPLL before 65 years of age and 57,665 YPLL to life expectancy. The age-adjusted rate per 100,000 for adults (aged 35 years) was 298.2 for SAM and 3,634.4 for YPLL to life expectancy.

Conclusions: Smoking is a major cause of deaths in Colorado, far exceeding the combined number of deaths from AIDS, automobile and other accidents, homicide, and suicide.

Learning Objectives: Impacts of cigarette smoking should be better described to public and policymakers.

Cigarette Smoking Trends Among Pregnant Women in the United States: Results From Behavioral Risk Factor Surveillance System, 1986–1995

J. C. Zevallos, K. Condon. C. Alo, P. Huang

Objective: To estimate the change over time of cigarette smoking patterns during pregnancy in the United States between 1985 and 1995.

Methods: We analyzed data from female respondents aged 18–44 years from the Behavioral Risk Factor Surveillance System telephone survey who participated in the yearly surveys from 1985 to 1995. We examined were the percentage of women who reported being pregnant and who currently smoked, and percentages by age-group.

Results: Overall, the prevalence of smoking during pregnancy has declined from 18.9% in 1985 to to 11.8% in 1995. The largest decline was shown in the 35–44-year-old age-group: 22.0% to 8.0% in the same period. Smoking rates among pregnant females aged 18–24 years showed the smallest decline between 1985 and 1995: 22.1% to 17.2%. An estimated 280,538 pregnant women who reported smoking everyday or some days during 1995, 204,000 (73%) were in the 18–29-year-old age-group.

Conclusions: It may be that public health education efforts to reduce rates of smoking during pregnancy have had a greater impact among older pregnant women, as suggested by the higher decline rate of smoking among this age-group. More emphasis on the benefits of nonuse of tobacco should be promoted among younger groups, which represent the majority of pregnant females who smoke.

Learning Objectives: Participants should be able to increase their knowledge on the use of tobacco products by pregnant females in the United States.

Tobacco-Related Mortality From Death Certificates In Texas

J. C. Zevallos, C. Alo, P. Huang

Objective: To assess the response by physicians on tobacco-related mortality from death certificates in Texas in 1997.

Methods: Since 1993, Texas death certificates includes a question concerning the contribution of tobacco-use to a particular death in a check-off box format, with possible answers of yes, no, probably, and unknown. We analyzed the 1997 Texas death certificates reports to estimate tobacco-attributable mortality among actual deaths. A death was attributed to tobacco use if yes or probably were checked on the tobacco contribution question.

Results: Of all death certificates, 117,111 (81%) were filled by physicians, 20,100 (17%) of which were designated to be a tobacco-attributable death. Of these deaths, 7,236 (36%) were attributable to cancer, 6,633 (33%) to cardiovascular disease, and 6,231 (31%) to respiratory disease.

Conclusions: Our findings suggest that the check-off box on death certificates provides valuable direct information regarding the effects of tobacco-use on mortality.

Learning Objectives: Participants should be able to use these results as an additional tool to enhance antitobacco policies, and to reenforce physician's antitobacco education programs.

Influenza and Pneumococcal Vaccination Rates Among Persons With Diabetes *Mellitus*

S. Benjamin, L. Geiss, M. Engelgau

Objective: To assess influenza and pneumococcal vaccination rates among persons with diabetes in the United States and Puerto Rico between 1993 and 1997.

Background: Immunization is an important public health intervention for reducing influenza and pneumonia morbidity and death among persons with diabetes. A national health objective for 2000 is to increase influenza and pneumococcal vaccination rates to > 60% among persons with diabetes.

Methods: The 1993, 1995, and 1997 BRFSS data were analyzed to determine state-specific information and sociodemographic characteristics associated with receipt of influenza and pneumococcal vaccinations.

Results: In 1997, 52.1% of adults with diabetes reported receiving an influenza vaccination during the past 12 months and 33.2% reported receiving a pneumococcal vaccination. Individuals with diabetes who reported having received either or both the influenza and pneumococcal vaccinations were more likely to be women, non-Hispanic whites, at least 75 years and older, and have more than a high school education. In 1997, only 12 of the states met the influenza objective and 23 came within 5 percentage points of the objective. No states reached the pneumococcal objective and none came within 5 percentage points of the objective. Overall vaccination rates improved between 1993 and 1997.

Conclusions: The findings from this analysis indicate that several states are far from reaching the national influenza and pneumococcal vaccination objectives for 2000 in their diabetic populations.

Learning Objective: Participants should be able to describe the need for improved influenza and pneumococcal vaccination coverage among persons with diabetes.

Correlates of Preventive Care Among Adults With Diabetes in Kansas

H. K. Ahluwalia, C. E. Miller, S. P. Pickard, M. S. Mayo, J. S. Ahluwalia, G. L. A. Beckles.

Objective: To assess factors associated with receipt of recommended preventive care among adults with diabetes in Kansas.

Research Design and Methods: A cross-sectional telephone survey was conducted among a sample of adults aged 18 years with self-reported diabetes. Recommended preventive care was defined based on four criteria: health-care provider (HCP) visits per year (4 for insulin users, 2 for nonusers), foot examinations per year (4 for insulin users, 2 for nonusers), an annual dilated eye examination, and a blood pressure measurement during the past six months. Multiple logistic regression analysis was used to examine the relation of sociodemographic, clinical status, and health-care access characteristics with receiving recommended care.

Results: The mean age of the 640 respondents was 61 years; 58% were women, and 86% were white. During the preceding year, 17% (95% confidence interval [CI], 14–20) of respondents met all four criteria for recommended care. The adjusted odds of receiving recommended care were higher for males compared with females (odds ratio [OR] 1.6, 95% CI, 1.1–2.5); for persons whose HCP scheduled follow-up appointments compared with those who self-initiated follow-up (OR 2.7, 95% CI, 1.6–4.8); and for former smokers compared with current smokers (OR 3.1, 95% CI, 1.6–6.9).

Conclusions: Scheduling follow-up visits for patients and targeting high-risk populations can be an effective way to deliver diabetes care in compliance with current guidelines.

Occupation, Race, Religion: Community Intervention Lessons Learned for Chronic Disease Control

D. Cookro, S. Junejo, J. Thomason, E. Feehan, T. Bunch, G. Foster

Objective: To describe lessons learned regarding population group specific interventions.

Setting: Franklin County, Florida; a rural coastal county in the Florida Panhandle.

Interventions: The Franklin County chronic disease prevention project began in 1997 with attempts to address a rural, diverse population. The project staff was encouraged to use an epidemiologic approach. Interventions needed to meet the needs of a population with several distinct occupations, including commercial fishing, and a minority faith population. Surveys were completed on a cross section of community members. Interventions were adjusted over time to meet the needs of these groups. Initial failures with some, led to new and more acceptable approaches. Community education targeted diabetes and hypertension. Risk factors addressed were smoking, exercise, and nutrition, which including weight management. Education was provided in a variety of locations.

Outcomes: A database of more than 400 local residents has been completed. Physical exercise has been promoted in three communities. The education and other services that are now available as a result of the project have enhanced the work of local health care providers. Importantly, the project staff has learned new ways to meet the needs of specific occupational, minority, and faith groups to gain their awareness of the message of chronic disease prevention.

Conclusions: Interventions for chronic disease prevention work better when population characteristics are determined and used effectively.

Learning Objectives: Participants will learn and share ideas on effective intervention with minority, occupational, and faith groups.

An Economic Evaluation of Physical Activity And Arthritis

C. Helmick, G. Wang, C. Macera, P. Zhang, M. Pratt

Objective: To analyze physical activity (PA) and medical costs among adults (age 20 years).

Methods: Analyze adults with arthritis (n = 5,071) vs. without arthritis (n = 14,136) using 1987 National Medical Expenditure Survey.

Results: Physically active persons reported engaging in moderate or strenuous PA at least 3 times per week during work or leisure time. Physical limitations (PLs) were defined as trouble in bending, lifting, or stooping. Medical cost savings related to PA, derived by subtracting the cost incurred by active persons from the costs incurred by inactive persons, were compared with those with and without arthritis. Analyses were stratified by age, sex, and presence of PLs. The prevalence of PA was 65% and 49% for men and women, 43% and 60% for persons with and without arthritis, 28% and 61% for persons with and without PLs, respectively. Fifty-five percent of persons with arthritis and 13% of persons without arthritis reported PLs.

Conclusions: Compared with persons without arthritis, medical cost savings are greater for persons with arthritis in all groups except those without PLs. The savings increase with age. If PA contributes to these savings, promoting PA among persons with arthritis should produce large economic benefits.

Learning Objectives: Participants should be able to discuss the relationships between arthritis, physical activity, and medical costs.

County-Level Burden of Diabetes in New York State

T. Hinman, A. Hosler

Objective: To define the burden of diabetes in each county of New York State and to promote an environment that supports quality diabetes care.

Methods: Information was compiled from the Behavioral Risk Factor Surveillance. System (BRFSS), Vital Statistics, hospitalization data, End Stage Renal Disease Network data, and the Minimum Data Set Plus (MDS+) for nursing home residents. Prevalence, mortality, hospitalization, associated risk factors, demographics, and information on births to women with diabetes were analyzed.

Results: Individual county profiles contain prevalence of diabetes by age-group, age and sex adjusted mortality rates, number of hospitalizations, end-stage renal disease rates (ESRD), and rates of amputations caused by diabetes. Findings show diabetes prevalence is high among counties where African Americans are concentrated. Mortality rates per 100,000 people with diabetes ranged from 6/100,000 (Orleans) to the highest of 33.4/100 (Bronx). Hospitalization rates per 1,000 people with diabetes ranged from 208/1,000 (Tioga) to 791.5/1,000 (Bronx). New York City, particularly Bronx and Brooklyn, and the more rural areas in the northern portion of the state have some of the highest rates for hospitalizations of people with diabetes, as well as highest rate of lower extremity amputations and ESRD prevalence. These areas of the state are burdened with more costly care per person for those with diabetes.

Conclusions: Information from a variety of sources can be used to develop county-specific profiles to assess the burden of diabetes. This information is a tool that can be used for identification of the targeted areas for more focused prevention program activity.

Identifying Site Characteristics and Technical Assistance Needs in Walk Texas!

J. Hitt, N. Gottlieb, N. Stancic, J. Smith, R. Atwood, G. Sneden

Objective: To document site capacity, promote high levels of implementation, and identify technical assistance needs according to site characteristics in the expansion of the Walk Texas! program.

Setting: Twelve regional and local health departments involved in promoting physical activity programs in worksites and other community-based organizations.

Intervention: Walk Texas!, a population-based program grounded in transtheoretical theory, promotes regular, moderate physical activity as a way of life. The intervention employs action research to promote implementation. Local and regional health department representatives attended an orientation in November 1998 and implementation training in March 1999. Telephone interviews were conducted in May and June 1999 to assess start-up implementation. Two high-performing sites were selected for in-depth interviews in July 1999.

Outcomes: Cross-case comparisons were constructed on mediating variables. Technical assistance needs were identified.

Conclusion: Assessment of community implementation will assist state health departments in providing technical assistance to sites based on a more thorough understanding of needs related to site characteristics. These data serve as it baseline for an ongoing project.

Learning Objectives: Participants will be able to describe ways that communities adapt resources to create their own programs, describe key factors in implementation based on site capacity, and identify technical assistance needs based on initial site capacity assessment.

Racial and Sex Differences of Overweight and Weight Control Strategies Among Adolescents in the United States

N. H. Kabeer, E. J. Simoes, T. Murayi, R. C. Brownson

Objective: To determine how the perception of overweight and strategies for weight loss vary among adolescents within racial and sex subgroups.

Methods: The Missouri Youth Risk Behavior Survey for 1995 and 1997 (n = 5,426) was used to examine sociodemographic and behavioral factors related to overweight perception among adolescents. Race and sex-specific analyses explored populations at highest risk.

Results: Adolescent girls were 83% more likely to perceive themselves to be overweight than boys, particularly in the white subgroup. Girls were twice as likely to attempt to lose and maintain weight than boys; this was true among whites and African Americans. Overall, girls were more likely to diet (OR = 5.66, 95% confidence interval [CI] 4.90, 6.53) and exercise (OR = 3.84, 95% CI 3.38, 4.35) to loss and maintain weight compared with boys. African-American girls were 50% less likely to diet and exercise to lose and maintain weight than white girls. In addition, girls were more likely than boys to vomit (OR = 6.01, 95% CI 4.34, 8.34) and take diet pills (OR = 8.48, 95% CI 6.18, 11.62) as a method for losing or maintaining their weight.

Conclusions: Overall adolescent girls were likely to perceive themselves as overweight more often than boys and more likely to use healthy methods of weight loss and maintenance rather than the recommended diet and exercise regimen. African American girls were less likely to diet and exercise to lose and maintain weight.

Learning Objective: Participants should be able to describe race and sex differences related to overweight perception, and weight control practices among adolescents and apply this information to develop more effective prevention strategies or early interventions.

Quality Measure Audits for Seven Utah Third Party Payers

C. C. Merrill, M. Friedrichs

Objective: To obtain data from 2,500 medical charts in 7 health plans using HEDIS quality measures for diabetes care: HbAlc testing, eye examinations, LDL testing, nephropathy screening, plus actual HbAlc and LDL cholesterol levels. Remeasurement in 2001 will measure effectiveness of plan-wide interventions implemented in 1999–2000.

Methods: Utah DCP involved 11 third party payers, 90% market share, to explore quality improvement initiatives. Seven participated in the initial phase with 1998 chart data. Hard copy and electronic data collection forms and computer programs for analysis were developed. Interventions will be applied by 10 plans during 1999–2000. Remeasurement will be done in 2001.

Results: Early reports indicate high HbAlc testing, low eye examination rates, and significant variation among providers. Analysis will show the number of patients receiving HbAlc tests, HbAlc levels, those receiving eye examinations, LDL tests and values, number with triglycerides >400, percentage screened or treated for nephropathy. Results will be available for each third party payer for both Medicaid and commercial populations when applicable.

Conclusions: Results will show level of improvement needed to meet the Utah Diabetes Practice Recommendations. Data will be analyzed to identify differences in quality indicators among health plans and between Medicaid and commercial populations. Factors influencing differences between plans or providers may be determined. Data will allow comparisons to identify areas for improvement that can be applied throughout each plan.

Learning Objectives: Participants will be able to recognize the gap between practices known to foster better diabetes control and the level of application of those practices.

The Maine Diabetes Cohort: New Strategies for Diabetes Surveillance

N. Sonnenfeld, A. Marshall McBean, P. Hebert, W. C. Yang

Objectives: To assess completeness of diabetes reporting on Maine death certificates; to compare prevalence of diabetes in Maine Medicare beneficiaries measured from different data sources; and to measure mortality directly (rather than ecologically) among Maine residents with diabetes.

Background: In 1994, Maine had the 45th lowest prevalence of diabetes in the United States. During a similar time period, Maine ranked eighth highest in diabetes mortality. Thorough review of available surveillance data revealed that existing methods did not adequately capture the diabetes mortality experience in Maine. Therefore, we are developing new methods.

Methods: Using Medicare claims data, we will identify a cohort of Maine residents who were known to have diabetes. To assess the validity of Maine Behavioral Risk Factor Surveillance System prevalence data, prevalence of diabetes will be estimated from Medicare claims and adjusted for sensitivity of claims data. Diabetes prevalence in similar age-groups will be compared. Underreporting of diabetes deaths and overall mortality will be assessed by linking Maine death certificate data with Medicare beneficiary files. Underreporting will be examined by underlying cause of death and compared with estimates previously reported in the literature.

Results and Conclusions: In 1994, we detected substantial underreporting of diabetes deaths and some evidence of bias in diabetes prevalence estimates in Maine in 1992 and 1993. Additional results of the Medicare and death certificate linkage will be presented.

Learning Objectives: Participants should be able to describe the limitations in diabetes surveillance systems and gain insights into the advantages of individual follow-up.

The Effectiveness and Efficiency of Health Education Groups in an HMO

R. Toseland, P. McCallion, T. Smith

Objective: To determine the effectiveness and efficiency of a Health Education Program among elderly caregivers in an HMO.

Setting: The Ringel Institute of Gerontology and the Northeast Division of Kaiser Permanente.

Interventions: The effectiveness of the intervention program is being tested using a 2X4X3 randomized control-group design (2 conditions, 4 times of measurement, 3 leaders). A total of 110 spouse caregivers and their frail husbands and wives, enrolled in the Northeast Division of Kaiser Permanente, were recruited and randomly assigned to HEP or usual care. Caregivers and care recipients were assessed one week before the intervention program, one week after the 8th group meeting, and 1 and 2 years after baseline on: health and functional status, emotional well-being, social support, knowledge and use of community resources, and pressing problems. In addition, caregivers were assessed for burden level and pressing problems. The effect of HEP on the health care use and health care costs of caregivers and care recipients is also being examined. Results of the baseline to 8-week impact of HEP, analyzed by using random effects regression procedures, indicate positive changes in emotional well-being, knowledge of community resources, and pressing problems.

Outcomes: The study has important practice and policy outcomes because it examines whether health education groups offered by social workers in an HMO primary care setting can improve participants health and psychosocial well-being and reduce health care use. (Funded by the Agency for Health Care Policy and Research and the U.S. Department of Health and Human Services.)

Learning Objectives: Participants should be able to deal with the stressors of caregiving. The burden and poor health associated with caregivers should decrease as a result of their participation in HEP. The HEP program may be carried out at other HMO's across the country.

Poor Asthma Control in a Population of Medi-Cal Children With Asthma

E. G. Yamada, L. Roberto, R. Sudhakar, S. R. Wilson, D. M. Mannino, C. Mejia, N. Huss, J. Grado.

Objectives: Describe asthma control and reported medication regimens in a high-risk asthma population.

Methods: Asthma control and medication regimens were evaluated in 87 environmental tobacco smoke (ETS)-exposed, Medi-Cal-eligible children aged 3–12 years at enrollment (July 1997 to June 1998) in a controlled study of the effectiveness of an ETS-reduction intervention. All were seen for acute asthma during the previous year at the Valley Children's Hospital inpatient unit, emergency department, or urgent care clinics. At enrollment, all children were evaluated by pediatric pulmonologists; pulmonary function was tested (where possible); and the adult caregiver was interviewed regarding the child's asthma history, current symptoms, limitations, and medication regimen. Medication regimens at baseline and after specialist evaluation were coded as to the level of severity implied by that regimen.

Results: 84% were not adequately controlled as defined by >2 days of symptoms per week, >2 episodes of parental sleep interruption per month, FEV1 < 80% predicted, or physical activity limitation. After evaluation, 62% were prescribed medications consistent with a higher level of severity.

Conclusions: Despite the availability of the new asthma guidelines, many high-risk children with asthma were not adequately controlled, and common pre-evaluation regimens were identified that fell outside current guidelines (e.g., po albuterol/metaproterenol; prn inhaled corticosteroids).

Learning Objective: Participants should better understand level of symptoms present and range of reported medication regimens among high-risk asthma populations,

Direct Medical Costs of Overweight Among Healthy Adults by Geographic Regions

G. Wang, C. Macera, M. McGuire, W. Dietz

Objective: To assess the direct medical costs associated with overweight by geographic regions.

Methods: Using the 1987 National Medical Expenditure Lure Survey, we compared annual direct medical costs between normal weight (body mass index [BMI] of > 18.5–< 25, n = 8,055) and overweight (BMI, > 25, n = 6,628) adults (aged 18 years or older) for 9 geographic regions. All participants reported good or excellent health. We stratified the sample by age and sex. The costs were updated to 1997 dollars.

Results: Compared with normal weight counterparts, overweight men spent \$289 more and overweight women spent \$479 more on medical care in 1997 dollars. Except for men aged 18–24 years and both men and women aged 65–74 years, overweight persons had higher medical costs than did normal weight persons. For all 9 geographic regions, the cost savings of normal weight adults ranged from \$162 in the East South Central states to \$993 in the Mountain areas for women, and from \$263 in the South Atlantic states to \$1,108 in the Mountain areas for men.

Conclusions: Overweight was associated with increased health care costs, even when the people rated their health as good or excellent. The economic cost was higher for women than for men. The variation of cost across geographic regions was greater for men than for women.

Learning Objectives: Participants should learn regional differences of the economic impact of overweight in this country; and the high prevalence of overweight and the increased costs associated with it make successful treatment and prevention of overweight a major public health priority.

Establishing Collaboration Between the Mammography Data Collection Project and Mammography Centers in the State of Arkansas

A. R. Jazieh, I. Soora, J. Morin, C. Terry

Objective: To establish cooperation of the mammography centers in providing the requested data.

Methods: The Mammography Data Collection Project (MDCP) aims to collect data related to all the mammograms performed in Arkansas in 1997. Assuring the participation of the mammography centers was complicated by many obstacles and barriers including but not limited to patients and practice confidentiality, health care organization merging and takeover, and understaffing, employees' turnover, and technical difficulties in some of the centers.

Results: Contact was established with the mammography centers across the state of Arkansas. All 112 Food and Drug Administration approved centers were invited to participate in the MDCP. Collaboration of 87 centers (78%) was confirmed and more than 130,000 individual mammogram data were obtained. Various approaches and negotiation skills were used to ensure the maximum participation.

Conclusions: Multiple barriers may be encountered in such statewide projects involving many organizations. Overcoming many of these barriers is feasible and essential for the success of such epidemiological projects.

Learning Objectives: Participants should be able to identify barriers for statewide epidemiological projects and methods to overcome these barriers.

Taking a Look at the Asthma Problem in Utah

D. Beaudoin, L. Larsen, R. Rolfs

Objective: To better understand the burden of asthma, data from available Utah public health databases were identified and analyzed.

Methods: Asthma data from mortality, hospital discharge, emergency room visit, and prevalence databases were analyzed. Analysis yielded rates and trends for asthma for 1980–1996.

Results: Asthma mortality rates may be increasing in Utah. More than 82,000 Utahns reported receiving medical care for asthma in 1996. Asthma appears to negatively affect perception of personal health status. Forty percent of all emergency room visits for asthma were by children. Asthma hospitalization are a significant economic burden.

Conclusions: Available data sources revealed considerable information about asthma. However, data about patient self-management skills, provider medical management skills, and potential environmental influences are not available and are needed to complete the assessment and plan effective interventions.

Learning Objectives: Participants should be able to list public health databases that can be used to describe asthma in a state and gaps in data sources for describing asthma.

Early Identification of and Intervention for People at Increased Risk of Kidney Disease

W. Brown, K. King, D. Molony

Objective: To identify persons at risk for kidney disease by targeting those with diabetes and hypertension and first degree relatives of patients with hypertension, diabetes, or renal disease and provide education regarding methods to delay onset or progression of renal disease.

Setting: Targeted community-based health screenings.

Interventions: Screenings were advertised via local media and the information was provided to patients on dialysis. Participants were evaluated with a Health Risk Assessment, blood pressure and weight measurements, dipstick tests for microalbuminuria, hematuria and pyuria, plasma glucose and serum creatinine. All results except serum creatinine were provided at time of testing, plus educational materials and medical referral if necessary; serum creatinine values were mailed. One-and three-month follow-ups evaluated whether persons with abnormal values saw a physician as recommended and if the physician concurred with the findings.

Outcomes: Of the 889 persons screened, 636 (71.4%) had abnormal test values and they were encouraged to follow-up with a physician. Of the 331 follow-up responses received, 203 (61.3%) saw a physician within 3 months of the health screening. Thirty-six of the 203 (17.7%) reported screening diagnosis were confirmed.

Conclusions: Targeting screenings are an effective means of identifying persons at risk for kidney disease. The program was also effective in motivating persons with abnormal results to seek follow-up with a physician.

Evaluation of the 1997 Alaska Tobacco Tax Rate Increase

C. Schumacher, B. Fried, S. Mason-Bouterse

Objective: To monitor the impact of the 1997 Alaska tobacco tax rate increase from \$0.29 to \$1 per pack of cigarettes, with a corresponding rate increase for other tobacco products.

Methods: The Alaska Division of Health and Social Services (DHSS) collaborated with the Department of Revenue to monitor the monthly taxable wholesale sales and revenue from cigarettes and other tobacco products. DHSS worked with volunteers in communities to monitor the retail price of cigarettes. DHSS is using the Behavioral Risk Factor Surveillance System (BRFSS) and the Youth Risk Behavior Survey (YRBS) to monitor the prevalence of tobacco use among adults and young people.

Results: The tax rate increase occurred on October 1, 1997, and extensive stockpiling affected the data through May 1998. From June 1998 through October 1998, when stockpiling no longer affected the data, taxable cigarette sales were down 17%. Taxable consumption of other tobacco products decreased by 6%. The decrease in taxable consumption could not be accounted for by an increase in sales from military or Indian reservations. The average retail price per pack of cigarettes increased by \$0.88. A full year of poststockpiling sales and revenue data as well as data from the 1998 BRFSS and the 1999 YRBS will be available by fall 1999.

Conclusion: The decrease in sales was consistent with that predicted. Although sales decreased relatively quickly, one would predict that the prevalence of smoking will take longer to decrease and be more difficult to detect within the limitations of our data systems.

Learning Objective: Participants should be able to understand the issues related to evaluating tobacco tax rate increases, including understanding price elasticity of demand, the factors affecting statewide tobacco sales, and the limitations of surveys.

The California Dietary Practices Survey and BRFSS: Modern Day Canaries in the Coal Mine?

S. B. Foerster, M. P. Fierro, J. Gregson, S. Wu, M. Hudes, B. Davis

Objectives: To determine trends from 1989 to 1997 for dietary habits and from 1984 to 1997 on for physical activity, overweight, and diabetes and recommend appropriate action.

Methods: For diet, a modified 24-hour dietary recall was used. Both telephone surveys drew statewide samples using random digit dialing and were conducted by computer-assisted telephone interviews. The biennial dietary surveys included a cross-sectional sample of 1,000 persons annually, while the BRFSS reached more than 4,000 adults annually in 1997.

Results: In contrast to 1995, 1997 dietary trends were largely negative, and none of the state's dietary recommendations were reported as met by a majority of adults. Fruit and vegetable consumption returned to 1989 levels; only half of adults drank milk, with no significant increase in lowfat options; whole grain cereals fell by half; the effect of eating out was increasingly negative. From 1984 on, trends in physical activity were only marginally positive, rates of obesity increased nearly 50%, and diabetes rates increased at least 30%.

Conclusions: These findings suggest that there is a growing number of people at high risk of diet and physical activity-related chronic diseases. Increases in obesity and diabetes reported through the BRFSS may be like the proverbial canary in the coal mine. Clearly, large-scale campaigns and strong leadership at the state and national levels are needed to fight this new epidemic.

Learning Objectives: Participants should be able to understand trends in dietary and physical activity habits, project the public health impact, and recommended steps to improve the health of Californians.

California Teen Eating, Exercise, and Nutrition Survey (*CalTEENS*): An Insight into Teenagers' Lives

S. B. Foerster, M. P. Fieffo, J. Gregson, M. Hudes

Objectives: The new *CalTEENS* compares the reported food and exercise practices of California adolescents, aged 12–17 years, against state and national recommendations. The survey asked about fruits, vegetables, beans, whole grains, milk products, animal protein and empty calorie foods; physical activity and sedentary recreational activities; and eating out, awareness, knowledge, barriers and motivations for dietary improvement, physical activity, weight, school and home eating, and tobacco use.

Methods: In 1998, a representative sample of 1,213 California adolescents aged 12–17 years was obtained using random digit dial techniques and a newly developed computer-assisted telephone interview. Data were analyzed by sex; for three different age cohorts; and for white, Latino, African American, and Asian adolescents.

Results: Most adolescents did not meet any of the dietary recommendations. For the previous day, the mean servings of fruits and vegetables eaten was only 4.3; 30% did not have 3 or more servings of calcium-rich dairy products; 32% ate fast food; and only 29% reported one or more hour of vigorous activity. 31% were at-risk/overweight. Significant clustering of unhealthy habits was seen, with adolescents in high school (compared with middle school), who smoked, were physically inactive, or overweight having the poorest habits.

Conclusions: Implications for policy and for the planning of interventions will be discussed.

Learning Objectives: Participants will learn about a new survey technique, the dietary and physical activity habits of adolescents, and the potential public health impact.

Community Water Fluoridation and Dental Treatment Among Medicaid-Eligible Preschoolers in Louisiana

R. Barsley, S. Griffin, R. Romaguera

Objectives: To calculate, by parish (county), the prevalence of treatment for dental decay, especially if treatment was rendered in more expensive hospital operating rooms, examine the association between community water fluoridation (CWF) and prevalence of treatment for dental decay.

Methods: The Louisiana Department of Health and Hospitals provided data (July 1995–June 1996) to calculate the following variables for each of 64 parishes: percentage of population receiving fluoridated water (F); and percentage of Medicaid eligibles, aged 1–4 years, receiving any dental treatment for decay (T) and percentage receiving such treatment in a hospital operating room (H). In addition, the mean H and T were calculated for the 8 parishes fluoridated with fluoridated water (F>90%) and the 33 parishes nonfluoridated with nonfluoridated water (F<10%).

Results: The mean percentage of Medicaid-eligible preschoolers receiving treatment for dental decay in each parish was 18.2% (range: 6.6%–32.7%) and exceeded 25% in 20 parishes. Overall 2.7% of Medicaid-eligible children received treatment in a hospital operating room (range: 0.3–8.7%) and in 10 parishes the percentage exceeded 5%. In the 33 parishes nonfluoridated with non fluoridated water, the mean percentage of Medicaid-eligible preschoolers who received treatment for dental decay or received treatment in a hospital operating room were, respectively, 1.2 and 2.8 times higher than those in the 8 fluoridated parishes.

Conclusions: CWF is associated with less treatment for dental decay. Louisiana recently increased expenditures on CWF and will further use this mapping analysis to expand prevention programs in parishes with high levels of T and H.

Learning Objectives: At the conclusion of this presentation, participants should be able to understand the correlation between CWF and oral health outcomes; describe how mapping analysis can be used to assist in the efficient allocation of preventive resources, and discuss reasons for fuller cooperation between the operators of a Medicaid Information System, public health specialists such as epidemiologists, and public policy makers.

Heart Disease in Montana: Collaborating With Physician Offices to Identify Opportunities to Improve Preventive Services

J. Cannon, L. Blades

Objective: Assess care for patients with hyperlipidemia, CHF, or chronic A-fib; identify opportunities to improve services.

Methods: In collaboration with a four-physician practice in Montana, we reviewed records of patients with selected heart diseases having one or more office visits from March 1 through June 24, 1999. Diseases were: CAD, MI and post-MI, CHF, CAF. We determined the following for patients with CAD—the frequency of lipid documentation and proportion treated with lipidlowering agents; for patients with CHF—the frequency of assessment of left ventricular function and proportion treated with angiotensin-converting enzyme inhibitors or equivalent medications; and for patients with CAF—the proportion receiving an anticoagulant and proportion who received pneumococcal immunization.

Results: We identified 252 patients. Of these patients, 195 had CAD, 67 had CHF, and 88 CAF. 74% of the CAD patients had an LDL level measured within the past year; 69% were receiving a lipid-lowering medication; 82%.41% had lipid levels 130mg/dl and 100mg/dl, respectively. Of the CHF patients, 82% had a left-ventricular functional assessment and 45% of these had LVEF 40%. 57% of CHF patients were receiving ACE-I, and 60% of those with LVEF 40% were receiving ACE-I. Of those with CAF, 72% were receiving an anticoagulant. 45% had received pneumococcal immunization. These findings will be compared with recent national results (Am J Cardiol 1999; 83:1303–1307), and improvement interventions described.

Conclusions: This collaboration involved a state health department, a PRO, and private practice physicians in demonstrating a method to monitor care for patients with heart disease in outpatient settings. Important opportunities to improve care have been identified.

Improving Tobacco-Related Surveillance and Evaluation

M. Schooley, G. Starr, T. Pechacek, N. Stroup

In 1999, for the first time, CDC awarded funds for tobacco prevention and control to all 50 states, the District of Columbia, and its territories. For 33 states previously funded under the CDC IMPACT program, annual funding levels increased from an average of \$300,000 to \$1 million. For the 17 states formerly funded by the National Cancer Institute's ASSIST program, annual funding levels remained in the \$1 million range. The 1999 programs are distinguished by their strong focus on state-level surveillance and program evaluation. To assist the states, the Centers for Disease Control and Prevention's Office on Smoking and Health has formed an interdisciplinary team that provides models for program development, implementation, and evaluation and helps states improve the extent and quality of information used for surveillance and evaluation. Specifically, the team has developed a summary information source on the Internet (http://www2.cdc.gov/nccdphp/ osh/state/); helped states develop tobacco-related surveys for youths and adults; provided specific technical assistance to states; and served as an information clearinghouse. The team will also work with states to identify successful elements of programs that can be used by others. By synthesizing information from state, local, and academic groups, the team hopes to provide timely and relevant assistance to states to improve the effectiveness of expanded tobacco prevention and control programs.

Learning Objectives: To learn about CDC efforts to improve the evaluation of state tobacco prevention and control programs.

Periodontitis and Subclinical Lower Extremity Artery Disease

J. Elter, S. Offenbacher, J. Beck, A. R. Sharrett, G. Heiss

Objective: To determine whether periodontitis is associated with Lower Extremity Artery Disease (LEAD).

Methods: Preliminary Data on 6, 991 persons aged 52 to 75 years were obtained from the Atherosclerotic Risk in Communities (ARIC) Study 1996-98 examination cycle. Data included sociodemographics, measures of cardiovascular health, medical history, laboratory parameters, behaviors, and a complete dental examination. Periodontitis was defined as 60%+ sites with clinical attachment loss (CAL) at least 3 millimeters. Covariates included age, gender, ARIC field center, diabetes, LDL cholesterol, hypertension, and smoking. The dependent variable was LEAD, which was defined as ankle-brachial index (ABI) less than or equal to 0.90. ABI was calculated as ankle systolic blood pressure. Associations between periodontitis and LEAD were determined using odds ratios (OR) and 95% confidence intervals (CI), and confounders were simultaneously controlled using multivariable binary logistic regression.

Results: The unadjusted odds of periodontitis were significantly higher among those with LEAD as compared to those without LEAD (OR 1.9, CI 1.3–2.8). In a multivariable logistic model, periodontitis (OR 1.6, CI 1.1–2.5), smoking (OR 1.8, CI 1.1–2.9) were associated with LEAD, while adjusting for gender, age, LDL cholesterol, and ARIC field center.

Conclusions: These results indicate that periodontitis may be associated with atherosclerosis in lower extremity arteries.

Learning Objectives: Participants should be better able to describe the relationship of chronic periodontitis to LEAD.

Visual Communications Solutions

M. C. Barringer

This poster will illustrate common design problems and solutions when preparing scientific visual presentation materials. The attendee will see examples of effective design of charts and graphs, use of color, typeface choices, and other issues related to design. The poster will show through examples how and when (and when not) to incorporate graphics and photos into presentations, as well as how to use simple graphics instead of words to illustrate messages successfully. Handouts will be available.

Roundtables

Integrating Quality Diabetes Care in Health Care Agencies

J. Hare

Objective: To encourage and support assorted health care agencies to deliver quality diabetes care based on the implications from the program data they collect while delivering that care.

Setting: Southern Michigan Diabetes Outreach Network that serves a 10-county area. This is one of six diabetes outreach networks in Michigan.

Interventions: Agencies are supported by the Southern Michigan Diabetes Outreach Network to provide quality diabetes care by developing tools to make providing quality care and data collection easier, such as the diabetes report card or laminated posters to hang in examination rooms that serve as reminders to patients and caregivers of necessary tests or checks that need to be done; developing patient educational packets and brochures with a message that is clear and consistent; providing a quality assurance report of feedback for those agencies participating in the collection of data; helping agencies assess their demographics and patient mix (e.g., Are they reaching disparity population groups?); and providing continuing education credits for agency health care providers.

Outcomes: Agencies that participate in the disbursement of education and data collection for even a sampling of their patients, find that these patients experience much improved outcomes such as fewer hospitalizations, lower blood sugar, blood pressure and A1c levels, and are much more likely to get the periodic testing they need to monitor the progression of diabetes complications that result in a much lower complication rate. Although agencies may actually be providing the education and participating in the data collection for only a sampling of their patients, they are so influenced with the outcome data that they will usually follow through with the education to the other patients as well.

Conclusions: Health care personnel are willing to learn how to dispense correct, concise, easily understood information when the data provide positive outcomes, and the time demands are not great. Patients receive the latest diabetes information in an easy to understand, consistent manner, which leads to improved retention.

Learning Objective: Health care personnel should be able to discuss diabetes information in a clear, consistent, easily understood, and timely manner. The person with diabetes will have a better understanding of lifestyle and behavioral changes they can make to decrease the burden of diabetes for them and their families.

The Nursing Practice Challenge: Health Promotion, Cancer Prevention, and Early Detection

B. Ross, J. LeBlanc, P. Martinez, A. Monacelli, M. Stroud

Objective: To provide continuing education (CE) for nurses on health promotion, cancer prevention, and early detection.

Method: In 1997, a stateside survey of registered nurses was conducted to assess the CE needs of nurses in Texas.

Results: Fifty-percent of the respondents reported no involvement in cancer prevention, detection, or screening activities. Nearly all respondents (95% to 97%) indicated that nurses should play a major role in cancer education, detection, and prevention. Thirty-five percent reported preferring independent/self-study as the method of choice for earning continuing education units.

Conclusions: These data indicate that few nurses participate in cancer prevention and early detection activities, they recognize these activities as part of their professional role. Education of nurses has become a challenge because of changes in the health care system. The data indicates a significant number of nurses are interested in using the independent/self-study method for earning continuing education units.

Interventions: An independent/self-study poster on health promotion, cancer prevention, and early detection was developed to display with a series of posters on specific public health concerns including smoking; nutrition; obesity; smokeless tobacco; and breast, colon, and skin cancers. All posters are in brochure format and include a test and evaluation tool so that nurses can earn CE through independent/self-study. The posters are available to health care facilities and placed where nurses can view the posters at their convenience.

Learning Objectives: Participating nurses will identify their role in health promotion, cancer prevention and early detection, and describe early detection, screening guidelines for cancer.

An Integrated Approach to Reducing the Burden of Chronic Diseases in Missouri

J. Jackson-Thompson, E. J. Simoes, B. R. Malone

Objectives: To develop a long-range surveillance plan; and collect, analyze, interpret, and disseminate chronic disease data for use in planning, implementing, and evaluating the program.

Setting: Missouri Department of Health (MDOH).

Implementation: A long-range surveillance plan, developed in 1995 and implemented in 1996, is updated annually. Strategic issues include defining and assessing needs, ranking priorities, setting goals and objectives, and monitoring and evaluating programs. Components include collection of cancer incidence and behavioral risk factor data; analysis and interpretation of incidence, prevalence, and mortality data; and dissemination of data in a variety of formats. Additional components include quality assurance, development of internal and external partnerships, and constituency building.

Outcomes: Access to mortality data, additional funding for data collection, and increased analytic capacity have been obtained through memorandums of understanding and contracts. A new minority-focused monograph series has been initiated and annual reports are being produced. With support from Advisory Board members, professional associations, voluntary organizations and key legislators, expanded cancer reporting legislation has just been passed. Although long-term funding is still pending, regionalization has increased the use of Behavioral Risk Factor Surveillance System (BRFSS) data.

Conclusions: MDOH's integrated, long-range approach has facilitated program collaboration and expansion, leading to more timely and widespread data dissemination and usage. Through internal and external partnerships, the burden of chronic diseases can be reduced in Missouri.

Strategies for the Adoption of the Florida Diabetes Medical Practice Guidelines

B. Gaughan-Bailey

Objective: To impact policy in health systems by creating awareness of the *Florida Diabetes Medical Practice Guidelines*.

Setting: Florida diabetes disease management system.

Intervention: In 1996, the Florida legislature mandated the development of diabetes disease management strategies, which resulted in the *Florida Diabetes Medical Practice Guidelines* (finalized January 16, 1998). The guidelines were distributed to medical professionals and health organizations. A work group increased awareness by placing journal and newsletter articles, advocating change within managed care, conducting continuing education, and developing companion patient materials. Two video teleconferences highlighted the guidelines and self-management and reimbursement issues. The guidelines are policy in health departments. To measure clinical outcomes, a survey was conducted with practitioners on changes in patient care. The PRO completed a Medicare chart review to show changes in care. A baseline review was completed among Medicaid patients with diabetes and will be repeated to measure improvements.

Outcomes: Medicare data indicate an improvement in hemoglobin A1c values from 8.61 in 1995 to 7.86 in 1998, indicating better diabetes management. Surveying practitioners indicate that 40% believe the guidelines are useful.

Conclusions: Including medical professionals in the development of the guidelines increases the acceptability of the guidelines. Promoting the positive effects for patients as the purpose of guidelines also increases the acceptance of guidelines in the medical community. A multifaceted approach for creating awareness will improve the quality of care and reduce long-term complications.

Learner Objective: Participants will glean strategies for garnering support of practice guidelines.

Improving the Delivery of Clinical Preventive Services in a Community Setting

J. Melnikow, N. Kohatsu

Objectives: To determine the effect of the Put Prevention Into Practice (PPIP) office-based materials on the delivery of eight clinical preventive services (CPS) by family practice physicians.

Methods: Two comparable family medicine practices located in California's Central Valley were studied with one serving as an intervention site, the other as a control. Both practices involved community-based residency training programs. FPIP materials were made available to the intervention site with minimal, preliminary technical assistance and were excluded from the control site. Appropriate use of eight CPS was assessed by chart review at baseline, 6 months, 18 months, and 30 months using random samples of 500 patients at each time point and at each site.

Results: Seven of eight CPS (except Papanicolaou tests) were delivered at higher rates in the intervention site at 6 months compared with baseline. These rates, however, flattened or decreased by 30 months. Comparing linear trend rates for CPS at intervention and control sites, the intervention site showed more favorable trends for clinical breast examinations, mammography, and fecal occult blood testing, after adjustment for age, ethnicity, and insurance status using a multivariate logistic regression model.

Conclusion: Use of PPIP materials, without extensive external technical assistance or ongoing support, resulted in a modest improvement in the delivery of certain CPS. This gain was observed at 6 months but diminished thereafter. To see sustained, significant improvements in the delivery of CPS in community settings, substantial system changes, training, and ongoing support are probably needed to implement the PPIP materials.

Learning Objectives: Participants will increase their understanding of the delivery of clinical preventive services and how it can be improved.

Differences Between Consumer and Professional Perceptions of Quality Health Care

R. Marshall, Jr., M. Trainor

Objectives: To assess differences in perceptions of quality health care among consumers, physicians, hospital administrators, nurses, and other health professionals. To inform and guide a statewide initiative on measuring and reporting quality performance in hospitals.

Methods: Few studies of quality health care separate it into components according to perceptions held by different market segments—even those expected to use information about quality. Using a marketing approach, this research assesses the determinants of behaviors involved in seeking and using information on the quality of hospital care. Methods include focus groups (hospital users, nonusers, older adults, low-income, minority), intensive interviews (CEOs of hospitals, health plans, and businesses; state legislative leaders) and telephone surveys of adult populations (N = 600) and professional nurses (N = 150).

Results: Findings identify substantial gaps between consumer and professional perceptions of quality. Consumer perceptions of hospital quality relate to hospitality (hospital as a hotel) with the nurse as advocate and the physician as manager of the outcome. Consumers have little awareness of the hospital role in quality assurance (QA). Attending physicians believe they own the clinical outcome (hospital as an office building) and minimize hospital-based QA programs. They are skeptical that patients will use clinical outcome data, but support providing process and structural information (e.g., nurse and patient staff ratios). QA managers say that consumers simply assume clinical and technical quality. Hospitals need to do a better job of communicating with patients. Hospital CEOs support reporting on quality, but they are concerned about duplication of effort and the consumer's ability to interpret quality information.

Conclusions: The study identifies significant differences among consumers, physicians, and hospital executives in their perceptions of the hospital role in quality outcome management. Efforts to measure and report hospital quality should acknowledge and take steps to overcome these differences through consumer education and using a variety of measures and reporting formats to meet the needs of various information markets.

Learning Objectives: Participants will be able to demonstrate a scientific marketing approach to quality of hospital care, summarize the literature on approaches to quality measurement and reporting and discuss results of research on market segments (hospital users, nonusers, older adults, low-income) using focus groups, individual interviews, and general population surveys.

Packaged Intervention Programs to Reduce the Impact of Arthritis

T. Brady, M.. Boutaugh, C. Helmick, J. Kruger, L. Callahan

Objective: To review and compare packaged (ready to use) arthritis self-management education and physical activity intervention programs that have been evaluated, and to outline the next steps in prevention research for these programs.

Methods: A literature search to identify appropriate intervention programs that had materials and training ready to use, organizational support, and had undergone some evaluation to document their efficacy and effectiveness. Program characteristics and outcomes are summarized.

Results: Nine interventions were identified that met study criteria—three group education, two self-study education, and four group exercise programs. All but two of the programs are distributed by the Arthritis Foundation. Evaluation of these programs document a variety of effects including increases in self-care behaviors (i.e., frequency of exercise and relaxation techniques) and self-efficacy beliefs; and decreases in pain, physical disability, depression, helplessness, and physician visits. All programs reviewed have some degree of evaluation completed, but only two have cost-effectiveness evaluation, and there is little prevention effectiveness research completed.

Conclusions: Multiple arthritis self-management education and physical activity and exercise program packages are available for implementation by public health professionals; the Arthritis Foundation is a key resource for arthritis intervention programs. Effectiveness, cost-effectiveness, and effectiveness in reaching underserved audiences are key areas for future prevention research.

Learning Objectives: Participants should be able to describe the characteristics and benefits of nine packaged self-management education or physical activity and exercise programs that can be used to reduce the impact of arthritis, and identify the next steps in prevention research related to these programs.

Challenges in Monitoring Diagnostic Follow-Up Within Existing Chronic Disease Screening Program

J. Evans, D. Klaus, P. Troped, R. Palombo, K. Foell, J. Craycroft

Objective: To describe the challenges of monitoring diagnostic follow-up services within a chronic disease screening program for older uninsured and uninsured women in Massachusetts.

Methods: In 1998, the Massachusetts WISEWOMAN Project (MWWP) added diagnostic follow-up to a chronic disease screening program conducted in 17 sites that included VNA's, hospitals, and community health centers. Protocols for diagnostic follow-up for the five screenings (blood pressure, cholesterol, blood glucose, osteoporosis, and colorectal cancer) were developed based on national guidelines. Sites were to conduct screenings, track women with elevated values to ensure diagnostic follow-up, and then submit all screenings and diagnostic data to the MWWP.

Results: Submission of diagnostic data on clients with elevated values ranged from 25.7% for elevated blood pressure to 66.9% for osteoporosis diagnostics. Sites were queried as to why diagnostic data were unavailable. The 11 sites that responded listed the following major reasons: patient refusal for further testing (35%), patient follow-up by primary care physician (23%), clinical decision made not to pursue additional testing (18%), and decision to retest at annual rescreen instead (18%).

Conclusions: Several important health care and patient factors were identified as adversely affecting implementation of the diagnostic component of this CVD intervention program. As a result of the difficulties encountered in interfacing with the current health care delivery system, major program changes in data collection are being considered. One change is that diagnostic follow-up of women with abnormal screening results will be monitored through chart audits on a random sample of program participants.

Learning Objectives: Participants will gain an understanding of the complexities involved in collecting diagnostic follow-up information.

Interrelationships Between Glycemic Control of Type 2 Diabetes and Periodontal Infection

G. W. Taylor, C. Tsai

Objective: To assess the relationship between glycemic control of type 2 diabetes and periodontal disease and to assess the effect of periodontal infection on glycemic control.

Methods: We analyzed data on 4,343 adults aged 45–90 years from the third National Health and Nutrition Examination Survey (NHANES III) using weighted logistic regression to evaluate the association between glycemic control of type 2 diabetes and severe periodontitis. We also conducted a systematic review of literature published since 1960 to evaluate the effects of severe periodontal infection and its treatment on glycemic control.

Results: Among United States adults aged 45–64 years with poorly controlled diabetes were 2.9 (95% confidence interval [C.I], 1.7–4.7) times more likely to have severe periodontal disease than those aged 45–64 years who did not have diabetes after other covariates were controlled. There were no significant differences for the poorly controlled group aged 65–90 years, or for those with well-controlled diabetes when compared with the referent group without diabetes. The systematic literature review provided both epidemiological and clinical evidence to support considering periodontal infection as a contributing factor to problems maintaining glycemic control. However, further rigorous systematic study in diverse populations is warranted to establish the impact preventing and treating periodontal infections can have in contributing to glycemic control management and possibly to the reduction of the burden of complications of diabetes mellitus.

Conclusion: These analyses provide epidemiological evidence for an association between poorly controlled diabetes and severe periodontitis as well as evidence for severe periodontitis as a risk factor for poor glycemic control.

Learning Objective: Participants should be able to discuss the reciprocal relationship between type 2 diabetes and severe periodontal disease and to describe the status of evidence on this topic.

Getting a Statewide Physical Activity Coalition Off and Running

E. Graves

Objective: To coordinate physical activity promotion efforts in Texas, to inform the public about the importance of physical activity, and to educate professionals about current physical activity research and trends.

Intervention: In October 1997, TDH, AHA, ACS, TAHPERD, AWHP, and other agencies established the Texas Coalition for Physical Activity to promote the *Surgeon General's Report on Physical Activity*. Members attended the first AIM 30 training, met monthly the first year to sort out roles and responsibilities, and developed an action plan. Members coordinated distribution of materials and training information throughout the state. During the second year, the group renamed the Texas Physical Activity Network (TPAN). Although there are no current plans to form a Governor's Council, the group has sought and received recognition from the State Health Commissioner as Texas' GCPF&S and NCPPA contact.

Outcomes: The group developed Texas' First Annual All Communities Exercise (ACE) Day in May 1999, an event that encouraged communities to coordinate exercise activities at a specified time. More than 700 communities requested materials, evaluations were extremely positive, and media coverage was extensive. To educate professionals, TPAN sponsors ongoing educational workshops. Noted speakers provide health, wellness, and physical education professionals with practical information.

Conclusions: TPAN's establishment has resulted in collaboration among agencies, increased awareness of physical activity's benefits among Texans, and continuing education for professionals. TPAN demonstrates that a formal governor's council is not necessary for successful statewide physical activity coordination.

Learning Objectives: Participants should be informed about coalition-building and statewide physical activity promotion planning.

Partnering to Encourage the Standards of Medical Care for Patients With Diabetes Mellitus

M. Mendez

Objective: To encourage the use of the *Standards of Medical Care for Patients With Diabetes Mellitus* in an office or clinic setting.

Setting: Six medically underserved communities in Indiana.

Interventions: A multidisciplinary committee meeting from throughout the state of Indiana expressed concern that the Standards of Medical Care were not being achieved in Medically Undeserved Areas (MUSA) and Health Professional Shortage Areas (HPSA) of the state. Of the 92 counties in Indiana, only 30 are not included in MUSA or HPSA designations. The Diabetes Control Program partnered with hospitals in these areas to disseminate the American Diabetes Association's *Standards of Medical Care for Patients With Diabetes Mellitus*. Because the health care team includes both health professionals and people with diabetes, both groups needed information about the standards.

Outcomes: The health care professionals, such as family practice physicians, internal medicine, and gynecologist were mailed the standards with information about the burden of diabetes in Indiana. Persons with diabetes who attended regional symposiums were presented with the standards. The presenters were from within the area and included endocrinologists, family practitioners, persons with diabetes, pharmacists, ophthalmologists, nephrologists, podiatrists, registered dietitians, registered nurses, physical therapist, social workers, and others who reinforced the team approach to care. Physicians who had patients attend the program were sent the standards a second time after the program.

Outcomes: Participants are followed at 3 months and 1 year to determine if there has been changes in their diabetes care. Physicians received a survey at 1 year postprogram.

Learning Objectives: Participants will relate partnership opportunities to encourage the use of standards of medical care for patients with diabetes in their own setting.



Using an Organizational Collaborative to Address Colorectal Cancer

M. C. Wood, C. A. Tomeo, L. Holm

Objective: To organize a coordinated plan for data gathering, public information, and professional education around colorectal cancer for Massachusetts.

Intervention: Twenty-three organizations including the Massachusetts Department of Public Health, American Cancer Society, cancer centers, universities, HMOS, and health professions came together in 1997 to form the unfunded Massachusetts Colorectal Cancer Working Group (MCCWG). Its first step was to develop a strategic plan with a primary focus on health professionals.

Outcomes: MCCWG has surveyed health professionals and the public and gathered screening data using insurance and Behavioral Fisk Factor Surveillance Survey (BRFSS) data. It has developed professional materials and trainings. A new brochure is the first piece of its public information plan. Members voluntarily contribute financially and in-kind to the various projects.

Conclusions: Despite having no specific funding source, MCCWG is highly effective enabling members to jointly formulate and carry out the programs.

Learning Objectives: Participants will gain an understanding of how to form a coalition of organization to address a health-related issue. They also will gain knowledge of how to effectively develop professional education projects around colorectal cancer.

Facilitating Collaboration Between HMO's and Community Health

L. Neville

Objectives: To create tools and establish relationships between health maintenance organizations (HMOs) and the Michigan Department of Community Health (MDCH) to facilitate dissemination and implementation of best practice guidelines to providers and health programs to HMO members.

Setting: Michigan HMOs.

Interventions: Historically, HMOs have not sought the expertise of MDCH staff or resources in planning health prevention and promotion programs. MDCH contracted with Michigan Public Health Institute (MPHI), a private, nonprofit institute, to assess needs and determine mechanisms for promoting collaborations between HMOs and MDCH toward quality, cost-effective programs.

Outcomes: An assessment tool was developed to assist HMOs in determining community health administrative policies, standard practices, and services needs. A comprehensive hands-on resource guide, A *Michigan Guide to Health Programming for HMOs*, was compiled to assist HMOs in efficiently accessing MDCH resources to meet identified needs. A consultant is available to facilitate collaborative programming. A demonstration project indicated confidence that the assessment tool identified HMO strengths, internal resources, and potential for collaboration; the Guide improved knowledge of resources; and the consultant effectively increased understanding and communication among HMOs and MDCH.

Conclusions: Tools that assist HMOs in identifying needs and facilitate easy access to resources can be effective mechanisms in establishing collaborative ventures and increasing the use of state community health resources in a managed care system.

Learning Objective: Participants should be able to discuss how state health departments can increase opportunities for collaboration through the development of specifically designed tools and efforts.

Successful Community Outreach Through Public-Private Partnerships

J. Gustavson, J. Asarian-Anderson, P. Hassakis, A. Castaneda

Objective: Determine the efficacy of community-based public and private partnerships for nutrition education programs targeting 10,000 families with annual household incomes of less than \$20,000.

Setting: Los Angeles County farmers' markets located in ethically diverse and economically disadvantaged communities.

Intervention: In partnership with government and private organization, registered dietitians, nutrition students, with trained promotoras deliver food and nutrition theme lesson plans within a cultural context at Ask the Dietitian Program at seven market locations. Strong partnerships generated a unique resource pool. Los Angeles County Health Department Binational/Border Health Program and the Nutrition Program through a California Nutrition Network grant contributed promotoras, nutrition management staff, and a research analyst to document efficacy skills of promotoras at Ask the Dietitian booths. Southland Farmers' Market Association provided marketing and media expertise. Los Angeles Project LEAN (Leaders Encouraging Activity and Nutrition), a coalition with more than 200 members representing programs and organizations, produced additional resources.

Outcomes: Nutrition and health programs at farmers markets are expanding to new sites. Evaluation methods document community contact including increase of repeat visits. Cultural and language relevancy increase community outreach. Other important health information, the dangers of illegal prescription medication, is being distributed and evaluated at additional farmers' market locations based on program success.

Conclusion: Forming collaborative partnerships with private enterprise, nonprofit health groups, and government agencies opens new avenues for promoting health messages for disadvantaged populations.

Learning Objectives: Participants will be able to identify partnership resources to create and expand nutrition and health programs in communities with unique socioeconomic and cultural needs.

Promoting National Diabetes Awareness Campaigns Through a Statewide Diabetes Education Workgroup

L. Shea

Methods: The New York State Diabetes Control Program solicited volunteers to represent various geographical areas in New York State from the 43 coalitions it funds. This group had the task of reviewing and advising in the design of educational materials that were developed by the New York State Diabetes Control Program. The group met regularly to discuss the best methods of using the materials to reach high-risk and low-literacy populations. Their input was sought for two national education programs; the National Diabetes Education Program, and the Diabetes Lifesaver Flu Campaign. The workgroup formed partnerships with the regional immunization coordinators to disseminate the Diabetes Flu Campaign materials across the state. In addition, all coalition members had the opportunity to contact their workgroup representative with their ideas, comments, and suggestions on how the materials should be used.

Results: The workgroup was instrumental in coordinating collaborative efforts between the local County Health Department's Immunization Programs and Community Coalitions for Diabetes Prevention to disseminate information on the Lifesaver Flu Campaign. As a result of the workgroup's input, educational materials from the National Diabetes Education Program will be used for high-risk populations in their communities. The workgroup will continue to meet regularly to increase public awareness of diabetes and promote educational activities.

Objectives: Use collaborative approaches to get important health messages out to the public and promote awareness of the importance of using and distributing educational materials to diverse populations.

Cancer Genetics in New York State: New York State Department of Health Projects Aimed at Improving Collaboration and Educational Outreach

K. Greendale, S. J. True

Objectives: To strengthen collaboration among providers and public health personnel concerning cancer genetics; to provide educational opportunities relating to genetic counseling, research, and testing for breast, ovarian, colon, and prostate cancer.

Setting: New York State.

Interventions: The Genetics Education and Information Program, Bureau of Chronic Disease Services, New York State Department of Health has initiated a variety of programs and projects during the first project year. A network of genetic counselors and other well-trained providers in the state provides risk assessment and pretest and posttest genetic counseling to patients and families. We have developed an E-mail list that includes nearly 100 genetic counselors, clinical geneticists, oncologists, public health workers, researchers, and NYS Healthy Women Partnership members with interest or need to know regarding cancer genetics. The list distributes information on relevant conferences, journal articles, new clinical programs and research projects in the state, and encourages communication and collaboration. A clinical guideline Genetic Susceptibility to Breast and Ovarian Cancer—Assessment, Counseling and Testing Guidelines funded by the NYSDOH, organized by the American College of Medical Genetics and developed by key stakeholders has been disseminated to nearly 25,000 primary care providers and nongenetics specialists throughout the state. Educational efforts sponsored by the DOH have targeted genetics and nongenetics providers, women at risk, and public health personnel, including participants in our division's various community-based programs and partnerships. Such educational programs will be duplicated, strengthened, and expanded in the coming year, and a cancer-focused risk-scoring instrument piloted in one of our regions.

Outcomes: Not yet measured.

Learning Objectives: Participants should be able to discuss how state health departments can increase collaborative activities and participate in educational activities in the burgeoning field of cancer genetics.

A Statewide Collaboration of HIV/STD Prevention Education

B. Edmondson, A. McLendon, H. Jenkins, L. Marella

Objective: To establish, strengthen, and expand HIV/STD prevention education within school health education by collaborating with state and community-based organizations.

Setting: A collaboration of state and community-based organizations providing statewide training and resources for school personnel in Connecticut.

Interventions: The Connecticut State Department of Education and the Connecticut Department of Public Health established a task force to develop a comprehensive plan to ensure the systematic implementation of quality HIV/STD prevention education. The task force was charged with establishing, strengthening, and expanding HIV/STD prevention education. Members of the task force were carefully chosen to ensure a balanced and diverse representation of health professionals, parents, clergy, and educators. This collective approach enables the task force to identify the strengths and weaknesses of existing programs that helps to avoid duplication of services and identifies implementation gaps.

Outcomes: As a result of the diverse task force, bridges were built and linkages made with various statewide organizations. A trust was established the enhanced the delivery of vital prevention education that meets the needs of the school districts. To date, more than 300 school personnel have been trained and supplemental resources offered to the districts including consultation services.

Conclusions: Collaboration among a diverse task force has allowed for an exchange of vital expertise in creating an informational, motivational, and behavioral skills-based approach to HIV/STD prevention education in Connecticut schools.

Learning Objectives: Participants will be able to analyze the benefits of a statewide collaboration and identify potential roadblocks and possible solutions to collaboration.

Education and Training Opportunities for Staff of the Community Health Centers

C. Goodall

Objective: To improve the care of and services for the economically underserved and minority populations with diabetes.

Setting: Nineteen of 60 Federally Qualified Health Centers in 11 Ohio counties. Two centers were urban and 9 were rural, which represented 7 of the 29 Appalachian Counties.

Interventions: The education programs have targeted the professionals and all levels of their support staff. Through role-playing, the clerical training includes a basic discussion of diabetes. Physicians, nurses, dietitians, counselors, and dental staff participate in the professional education sessions. These are presented by a team with an endocrinologist, diabetes nurse educator, and a registered dietitian using case studies to discuss the revised diagnostic criteria and the current treatment strategies. In addition to the training, 10 random chart audits have been conducted at each center to collect patient demographics and to assess the provision of diabetes care and services.

Outcomes: Ninety clerical staff and 125 professionals have attended the sessions. All of the participants have rated the programs excellent or very good. Follow-up chart audits will be conducted to determine the use of a flow sheet in meeting the *National Standards of Care* and to identify future needs.

Conclusion: Because of the lack of endocrinologists, CDEs, and RDs in the areas served by the Community Health Centers, the educational updates have been enthusiastically received by these practitioners. They welcome additional opportunities for educational updates and sharing of new resources.

Learning Objectives: Participants will be able to use the *National Standards of Care* and other available resources in their practices and case management.

From Heart Health to Healthy Communities: Operationalizing Lessons Learned in Community Capacity Building

L. B. Littlejohns

Objective: To plan, carry out, and evaluate strategies to address the goal of enabling communities to take action on heart health.

Setting: Rural communities in central Alberta, Canada.

Interventions: Heart of the Land was one of four demonstration sites of the Alberta Heart Health Project. Traditional strategies (e.g., risk screening, health education) were implemented that targeted adults in two rural clusters of communities in central Alberta. These community mobilization strategies explicitly addressed individual behavioral goals of the project; that of increasing heart health knowledge, skills, and behaviour. To address the goal of enabling communities to take action on heart health, a community capacity-building approach was deemed necessary. Community capacity is defined as the ability of the community to work together to take action on health issues. Through a participatory process, capacity domains were defined and assessed by community participants and project staff.

Outcomes: Findings were reflective of the traditional strategies implemented. The community capacity domains that were well-developed in the project included knowledge and skills, resources, and public participation in activities. Domains that were not well-developed included shared vision, critical learning, leadership, and public participation in decision making.

Conclusions: We conclude that health promotion and disease prevention initiatives that address community capacity building in project design, implementation, and evaluation will be more effective and sustainable than those that do not. We have taken the lessons learned from the heart health project and applied them in a regional Healthy Communities Initiative.

Learning Objectives: Participants will be able to discuss key domains of community capacity and how health promotion and disease prevention practitioners can help assess and build community capacity for action on health.

Genetics Teaching and Referral for Public Health Nurses

C. Henderson

Objective: To increase appropriate genetic referrals and patient teaching in public health clinics.

Setting: Ten public health clinics in San Antonio, Texas.

Interventions: The staff of the Genetics Clinic At Santa Rosa Children's Hospital conducted a chart; review at 10 public health clinics and, in collaboration with San Antonio Metropolitan Health District (SAMHD) staff, developed genetics referral protocols based on the finding of the chart reviews. An in-service on the principles of genetics was given by the Santa Rosa staff, with SAMHD nursing staff knowledge base being measured with a pretest and posttest. All staff nurses were instructed in the implementation of the genetics protocols and protocol books were issued to each clinic.

Outcomes: Chart reviews have revealed that appropriate referrals for genetic screening and counseling have increased in the clinics. Additionally, public health patients are receiving better education regarding their conditions from the nursing staff.

Conclusions: Program-specific education and protocol development increase understanding, use, and service delivery among staff nurses.

Learning Objectives: Participants should be able to discuss the development and evaluation of program-specific protocols.

How Can Bioterrorism Initiatives Benefit Chronic Disease Programs?

T. Lacher, K. Sunnarborg, B. Mahoney, B. Hermes

Objective: To enhance information and communication systems at the state and local level.

Setting: State and local public health departments in the United States.

Interventions: In August 1999, the Centers for Disease Control and Prevention (CDC) initiated the cooperative agreement program "Public Health Preparedness and Response for Bioterrorism." One of five focus areas of the program is the Health Alert Network (HAN)/Training. Specific goals of the Health Alert Network are to 1) assist local health departments to establish and maintain a network that supports exchange of key information over the Internet, 2) train health workers, 3) assure that organizations have the capacity to respond to bioterrorism and other urgent health threats, and 4) provide for rapid dissemination of public health advisories to the news media and the public at large. Examples of how Texas public health agencies use the HAN in conjunction with chronic disease projects will be discussed.

Outcomes: By participating in the HAN, grantees will enhance agency communication infrastructures, improve capabilities to communicate via the Internet, expand public health workforce training opportunities via distance learning technology, build capacity for surveillance and epidemiologic investigation, and increase staff competency to conduct organizational assessments and establish performance measurements.

Conclusions: The HAN focuses on strengthening information systems and communication networks that are critical to state and local public health. Once established, the HAN will become a mechanism to disseminate key information about chronic diseases to health professionals and the public.

A Statewide Media Campaign to Improve Awareness of the Seriousness of Diabetes

B. Bodily, B. Larsen

Objective: To improve the public awareness of the seriousness, risk factors, and signs and symptoms of diabetes.

Methods: Phase one of the Utah Diabetes Control Program's diabetes awareness campaign was conducted during March–June 1999 in collaboration with the Utah Department of Health's *Check Your Health* (CYH) media program. CYH is sponsored by KUTV Channel 2 (Utah's CBS affiliate), Intermountain Health Care, and the Utah Department of Health. The campaign included television public service announcements (PSAs); radio PSAs on Spanish and English language radio; busboards along the urban Wasatch Front; television interviews with local health professionals; a newspaper insert; an advertisement in the *Hispanic Yellow Pages*; brochures and posters; a toll-free resource line; a press conference to kick-off Diabetes Alert month; and newspaper stories. Each of these components displayed the toll-free CYH Resource Line number for further information and referrals. Social marketing strategies were used to test the messages with the targeted group. Program costs totaled \$117,150. An additional \$288,002 was donated to the campaign by CYH (\$29,985), KUTV Channel 2 (\$120,000), and the Utah Broadcaster's Association (\$138,017).

Outcomes: A media analysis revealed that the busboards provided 29,685,846 exposures (81%–90% of adults were exposed 5–17 times), the newspaper insert reached 670,548 adult readers, and the television PSAs reached 81% of 25–54-year-olds an average of 5.6 times during the three months.

Learning Objectives: Participants will be able to describe effective components of a collaborative diabetes awareness campaign.



Using Health Department Media Production Capacity to Promote Chronic Disease Issues (The Cancer Story)

L. Hall, A. Pennell, Ohio Department of Health (ODH)

Objective: To access television outlets to promote cancer prevention through partnership between the Cancer program and the Media Center by using internal media production capacity.

Setting: ODH and Ohio media outlets.

Interventions: The ODH has developed a high quality collection of media production staff and resources. The Media Center works with programs to develop health promotion tools and campaigns. They create original programming for broadcast and cable systems in Ohio. This presentation describes how the ODH Cancer Program worked with the Media Center to produce three cancer awareness and prevention related segments for the Department's existing monthly television program, "PH-1, Public Health Television."

Outcomes: The Media Center worked with the Cancer Program to air segments about skin, breast and cervical and colorectal cancers. These programs were produced entirely in house. This program is shown several times a week across the entire state by over 45 cable systems. The program elements are also repurposed into other tools and made available to local health departments and projects for older audience viewing.

Conclusions: By working together with existing resources, cancer programs can partner to use new methods of providing high quality information to raise public awareness of prevention and early detection. New low cost technology coupled with vision and ability can bring chronic disease prevention messages to the public's attention in ways they are familiar with receiving them.

Learning Objectives: Participants will gain an awareness of how technology can improve internal and external communications to more effectively get their prevention message out.

A Collaborative Model for the Provision of Health Care Services in a High School Setting

M. Withey, S. Grunwald

Objective: To examine the various partnerships required to provide a model for health service delivery to adolescents in a high school by hospital personnel.

Setting: Windham High School, Willimantic, Connecticut (grades 9–12; enrollment, 925 students).

Interventions: In response to a high number of students with fragmented or no medical and mental health care, the Windham Board of Education, in partnership with the Windham Community Memorial Hospital established a satellite clinic in the school. A number of collaborations are in place that make this a successful program. The main collaboration is between the Board of Education and the hospital but there is also a community advisory committee, collaborative relationships with the school health program, teachers and administrators in the school, local community agencies and the funding partnership with the Connecticut Department of Public Health and managed care organizations.

Conclusions: Careful coalition building is essential for the successful development and implementation of a school-based health clinic.

Learning Objectives: Participants will learn a collaborative model for effective health and social service delivery among adolescent students that can be.

Tobacco Awareness Program for Youth Offenders: The Texas Experience

B. Sharp

Objective: To provide statewide availability of a high-quality tobacco awareness class for minors cited for tobacco possession.

Setting: Throughout Texas.

Interventions: A 1998 state law made tobacco possession illegal for minors, which is punishable by a fine, an awareness class, community service, or loss of drivers license. During the past 18 months, the Texas Department of Health, in collaboration with the Texas Cancer Council, state Comptroller of Public Accounts, Texas A&M University, and the University of Houston has adopted and disseminated a behavior interruption curriculum based on the Stages of Change model to more than 260 instructors statewide. These instructors provide services directly to the young people in approximately 90% of the state's 254 counties. In addition, the state has run two media campaigns aimed at increasing the public's awareness of the new law.

Outcomes: This community-based intervention has served more than 3,500 young people since the law was enacted in January 1998. The curriculum has received positive feedback from instructors and participants and preliminary data indicate that the class has had a positive impact on the tobacco use patterns of the participants.

Conclusions: Through active community efforts in enforcement and referral to the tobacco awareness class, minors can take steps to reduce their nicotine addiction. The next step is to continue dissemination to the rural communities in the state.

Learning Objectives: Participants should be able to discuss the role of local, state, and university partnerships and audience-specific curriculum design in efforts to decrease tobacco use among young people.

Use of a Public-Private Partnership to Deliver a School-Based Nutrition and Physical Activity Program Throughout Massachusetts

M. F. Bettencourt, J. Robarts, R. Palombo, E. Metallinos-Katsaras

Objective: To expand a school-based nutrition and physical activity program model for middle schoolchildren through a public-private partnership.

Setting: Massachusetts Public Middle Schools.

Partnership: The Massachusetts Department of Public Health (MDPH) approached BlueCross and BlueShield of Massachusetts (BCBSMA) to ask their support to expand the *Healthy Choices* (HC), a school-based nutrition and physical activity program for middle schoolchildren designed to promote healthy eating and physical activity habits. The program emphasizes collaboration between schools and communities, and is designed to be adapted to the school community's needs and resources. The pilot HC program targeted overweight students and addressed areas such as body image, television viewing, healthy snacks, and body size diversity through nutrition activities, media message development, participation in various physical activities, and grooming classes. Based on the experiences of the pilot program, MDPH developed a training manual for statewide distribution— *Healthy Choices: A Guide for Designing School-Based Nutrition and Physical Activity Programs*.

Outcomes: BCBSMA augmented MDPH's statewide effort by providing the following: 1) a minimum 2-year commitment of \$50,000 in grants to support public middle schools in implementing a HC program, 2) financial support for the reproduction of the manual and collateral, 3) increased awareness of HC through advertisements in BCBSMA publications and press releases, and 4) technical support during the distribution phase.

Conclusions: This partnership benefited both parties in significant ways. MDPH created a successful school-based program that was ready to be disseminated. MDPH only had resources to distribute the program manual and provide technical assistance to a limited number of schools. This partnership made it possible for MDPH to provide materials to a broader audience, as well as to specifically support the development of a HC program in a number of Massachusetts schools. BCBSMA had a community-based physical activity campaign, *Jump Up and Go!* and was seeking to expand into the school setting. BCBSMA was able to adopt the HC school-based program model to complement their initiative. Both agencies were able to support and advance each other's programs through this collaborative effort.

Learning Objectives: Participants should be able to discuss how state health departments can increase the capacity of schools to deliver health promotion programs through public and private partnerships and building on existent programs.

Adding a Chronic Disease Control Perspective to a Children's Traffic Safety Program: Safe Routes to Schools

A. Seeley, B. Alberson, P. DaSilva

Objective: To reduce children's exposure to traffic injuries and chronic diseases by enabling them to safely walk and bicycle to school.

Setting: Statewide campaign.

Intervention: A statewide initiative to get more people more active more often includes a Safe Routes to Schools project for elementary and middle schoolchildren. The initial activity of this project is to promote the national Partnership for a Walkable America's Walk a Child to School Day event, this year in October 1999. The University of California, San Francisco and the California Department of Health Services allocated \$30,000 to recruit local communities and to provide them with camera-ready flyers, posters, press releases, proclamations, and a standardized walk day checklist in five languages. Technical assistance for planning and producing the walk event and corollary activities at schools and in communities are available via a toll free telephone call. This session will display the materials developed to recruit schools, event organizers, parents, and local government leaders to participate. By conference time, we can additionally report on the level of community participation.

Outcomes: Campaign materials promoting California's Walk a Child to School Day.

Conclusions: A chronic disease control program can meet its objectives to promote routine physical activity by partnering with organizations focused on improving air quality and traffic safety, preventing violence and injuries, and creating more livable communities. A Walk a Child to School Day event can promote routine physical activity as one of several objectives.

Learning Objectives: Participants should be able to partner with diverse state and local organizations to promote Walk a Child to School Day events in conjunction with the national campaign.

Significance of Social Support to Success Rates in a Physical Activity Intervention—March Into May

B. Spencer

Objective: To emphasize the need for a strong committee structure that provides social support and encouragement throughout the course of the March Into May Physical Activity Intervention or similar programs.

Setting: Texas Department of Health Offices—Five geographical locations in Austin, Texas, and one regional office in Tyler, Texas.

Interventions: The Texas Department of Health Wellness Program has implemented the March Into May Physical Activity Intervention during spring 1998 and 1999. Although the goal completion rates in 1998 were high enough to consider the program a success, they were lower than expected. In preparation for the 1999 implementation of March Into May, substantial changes were made in the structure of the committee that administers March Into May. Most significantly, day-to-day coordination was decentralized to provide a representative at each building who could maintain consistent support and encouragement to team captains and participants.

Outcomes: From 1998 to 1999, the participation rate for the Central Office (2,850 employees) was increased from 9.6% to 11.8%. Goal completion at the midpoint of the program was increased from 67.7% to 78.9%. Program goal completion was increased from 62.5% to 80.4%. Percentages of participant continuance throughout the program, and the percentages of participants who moved forward in their stage of change are being calculated.

Conclusions: A strong committee structure that provides consistent social support and encouragement increases the likelihood of individual physical activity goal completion and adherence to a physical activity routine.

Learning Objective: Participants will have a better understanding of how appropriate committee structure and consistent support and peer encouragement can significantly increase individual success rates for goal completion in March Into May or similar physical activity interventions.

A Community-Based Diabetes Intervention Program to Effect Self-Care, Manage Disease

J. Waller, R. Young

Objectives: Provide a diabetes self-care, disease management intervention as part of the Detroit-based Morris J. Hood, Jr., Comprehensive Diabetes Center of Wayne State University; tailor program to minorities; test effectiveness and applicability of program to larger chronic disease management intervention.

Methods: Education that emphasizes behavioral risk reduction, self-care, and disease management is offered in faith-based organizations. Teams (1 nurse, 2 community health workers) offer 12 classes, held twice monthly for 6 months. A curriculum designed for the project emphasized nutrition, exercise, foot care, psychosocial aspects of diabetes, weight, and blood pressure management. Personalized goal setting, small group interaction, and formal instruction are used. Program is based on chronic disease management model for minorities.

Results: Persons with diabetes, at risk for diabetes, and family members were enrolled, taught to use glucose monitors, effect change in weight and blood pressure, and complete diet and exercise diaries. Demographics, disease severity, health use, diabetes knowledge profiles of at risk persons and those with diabetes were compared. Medical, psychosocial, and behavioral outcomes will be evaluated at the end of the program.

Conclusions: Outreach teams can provide a diabetes self-care, disease management intervention if cooperative faith-based organizations offer access to parishioners. An intervention program operating at the community level can be an effective means of educating people with diabetes. Participants learn about prevention of complications, and how to apply knowledge to behavioral change.

Learning Objectives: Participants will be able to replicate the general design of a diabetes self-care, disease management intervention, targeting minorities; and learn epidemiological characteristics of persons with diabetes, and at risk for diabetes that participate in community-based programs.

Take Charge Challenge: The Clean Indoor Air Policy for Physical Activity

A. M. Snelling

Objective: To increase physical activity through the adoption of a worksite policy that supports the implementation of the intervention Take Charge Challenge.

Settings: Change agent worksites in health departments, schools, hospitals, and large private corporations.

Intervention: The Take Charge Challenge (TCC) is a 10-week physical activity worksite intervention. The implementation of TCC requires a worksite policy that supports employee permission for goal setting, and personnel support to promote participation, distribute incentives, and report results. The worksite clean indoor air policy restricts employees from smoking in the worksite and punishes violators, on the other hand, TCC gives permission for employees to set a physical activity goal at the worksite and rewards goal completion. This policy demonstrates that employers care about employee health through promoting physical activity. The clean indoor air policies were often implemented by decision makers who were influenced by employee health advocates. TCC also requires the support of decision makers who are influenced by employee health advocates. Community clean indoor air policies were often legislated once a critical mass of community change agent worksites mobilized and influenced legislators. A similar result may be expected to occur after implementing TCC.

Outcomes: From 1995 to 1998, 41 worksites have implemented the Take Charge Challenge. The average worksite participation rate has been 45%, with 23,000 participants and 65% goal completion.

Conclusions: As this intervention reaches more worksites in more communities, with support of change agent organizations like health departments and voluntary organizations, coalitions may be organized to influence physical activity community, state, and national policy.

A Practical Preceptorship-Based Initiative for Improving Diabetic Foot Care

L. Z. Nieman, L. E. Foxhall

Objective: To engage preclinical medical students in a pilot program to improve the foot care of patients with diabetes. This objective was part of a larger goal of involving preceptees in preventive education activities that can serve volunteer clinical faculty in ambulatory settings.

Setting: Ambulatory-based preceptorships in southeast Texas area serving medical students following the first year of training. All preceptor sites are part of the Texas Statewide Family Practice Preceptorship Program (TSFPPP).

Intervention: Eighty-eight students learned how to examine the diabetic foot, to document findings of the foot examination, and to perform patient education for enhanced foot care before completing a four-week, ambulatory-based preceptorship. Preceptors were provided with supportive educational materials on diabetic foot care. Students, preceptors, and patients evaluated their reactions to the program and suggested other preventive areas appropriate for student involvement. The overall program evaluation included a description of the foot problems uncovered by the students.

Conclusion: First results indicate that the students reacted very positively to learning how to examine the diabetic foot and provide diabetic foot education. Preceptors and patients also have responded positively. We intend to expand the program to the entire Texas Statewide Family Practice Preceptorship Program and to offer other preventive activities through the preceptors.

Learning Objectives: Participants should be able to identify preventive activities such as the diabetic foot examination that can benefit the preceptor's medical practice and his or her patients.



Extending the Breast Teaching Associates Professional Program (BTAP) to a Broader Constituency

C. Storthz

Objective: An educational program to enhance clinical breast examination techniques of physicians, nurse practitioners, and mammographers marked throughout the state, using trained individuals, interactive CDs, and videos.

Methodology: The focus of the program was to improve the awareness, technical skills, and interpersonal skills of physicians, nurses, and mammographers as a means of increasing early detection and diagnosis and ultimately, survival rates through a collaborating process of health providers and marketing professionals including Chester Storthz Advertising, Inc.; UAMS; St. Vincent Health System; McLaughlin Consulting Group; and ESI, Inc. The Breast Teaching Associates Professional (BTAP) program already existed in a limited venue, executed by specially trained women who got out in the field to have physicians give them breast examinations. The physicians techniques and communicative skills are then updated by suggesting new and improved methods that most were not taught in medical schools thus enhancing and extending the program to a larger population using more current and efficient media techniques. The approach prepares the physician for more intense training by increasing awareness, knowledge, reception, and retention. The CD-ROM contained a computer program for tracking mammography referrals and a reminder system. The program was distributed with the CD-ROM. Continuing medical education credits were offered for participation.

Outcomes: The videos were shipped in June. The project officially ends in September, so outcomes should be relatively conclusive.

Learning Objectives: Participants should be able to perform more effective clinical examinations, as well as teach patients better self-examination methodology. The built-in reminder and referral system should enhance earlier detection.

Developing a Statewide Physical Activity Initiative: The Great Pennsylvania Workout Week

B. Wyant

Objective: To increase the amount of physical activity that Pennsylvanians engage in, by promoting a statewide Great Pennsylvania Workout Week.

Setting: All citizens of Pennsylvania, through the Pennsylvania Department of Health's six District Health Offices statewide. The Pennsylvania Governor's Council on Physical Fitness and Sports and the Pennsylvania Department of Health encouraged the people of Pennsylvania to increase physical activity and to keep Pennsylvania on the move.

Interventions: An initiative promoting increased physical activity for good health and disease prevention was planned and conducted throughout Pennsylvania. During the Great Pennsylvania Workout Week, citizens across Pennsylvania reported minutes of physical activity. Per capita minutes of physical activity were tabulated by state health districts. On the final day of the week, the winning district received the Governor's Cup during ceremonies at the state capitol as a symbol of their participation and accomplishment. This award then is displayed by participating organizations in the winning district throughout the year. A run and walk led by the governor and first lady and exhibits by more than 30 representing physical activity, disease risk reduction, health and nutrition organizations emphasized the importance of physical activity as part of healthier living for Pennsylvanians.

Outcome: Evaluation of effectiveness considered numbers of registered people and organizations participating, and the total number of minutes of physical activity. More than 96,000 people across the state participated in the 1999 Great Pennsylvania Workout Week, reporting 24 million minutes of physical activity for the week. This was an increase in physical activity of 50% since 1998.

Conclusions: This event is the foundation for future initiatives cosponsored by the Governor's Council on Physical Fitness and Sports and the Pennsylvania Department of Health to promote increased physical activity throughout Pennsylvania.

The 1998 Master Settlement Agreement Between the Tobacco Industry and State Attorneys General

R. Nathan, T. Pechacek, H. Selin, B. Fishburn

Objective: To provide a comprehensive overview of the provisions of the November 1998 Master Settlement Agreement (MSA) between the tobacco industry and the 46 state attorneys general.

Setting: United States information will be of particular interest to all individual states.

Interventions: As a result of the November 1998 Master Settlement Agreement, 46 states will be receiving money from the tobacco industry (four states had settled previously). This money, much of which has no spending restrictions attached, will be in addition to money received from the Centers for Disease Control and Prevention for tobacco-related programs.

Outcomes: The discussion is intended to prompt participants to think about the MSA's relationship to their strategies for an integrated approach to comprehensive tobacco control and prevention, especially as it relates to what new data will be needed for planning and management of such programs.

Conclusions: The money from the Master Settlement Agreement adds new and complex dimensions to state funding approaches, especially as they relate to tobacco-targeted programs.

Learning Objectives: The topic discussion is intended to provide the audience with an appreciation for the complexity of the MSA, as well as strengths and weaknesses of the agreement with regard to public health outcomes.

Redesign of the Behavioral Risk Factor Surveillance System (BRFSS) Questionnaire for the Year 2001–2010

D. Nelson

Objective: To review process and progress toward redesigned the BRFSS questionnaire for 2001–2010.

Setting: Multiple locations (BRFSS is in all 50 states and most territories).

Summary: BRFSS is a critical source of timely public health data at the state, local, and federal levels. Through monthly telephone surveys, data on adult health risk behaviors are obtained in all states and in several territories. The Centers for Disease Control and Prevention (CDC) and the states are redesigning the BRFSS questionnaire for the next decade. States desire less required questions, and CDC and other federal programs want more questions that relate to their subject (breadth vs. depth). One approach to address these conflicting interests is to use a dual questionnaire. Criteria to be considered for inclusion in the BRFSS core questions will be based on scientific, data utility, and implementation issues. The Council of State and Territorial Epidemiologists is nearing completion of a survey of state BRFSS coordinators for their topic preferences, and CDC programs will be prioritizing topics by the end of July.

Conclusion: In this session, the considerations and process used to redesign the BRFSS questionnaire will be reviewed, and the proposed layout and topics for the BRFSS core for the next decade will be described.

Tools for Informing State Cancer Control Policy and Programs

N. Kanarek, D. C. Sockwell, L. Lackey, M. Barry

Objective: To develop a template for flexible, cogent, and simple state-specific tools designed for policymakers interested in promoting cancer prevention, strengthening the state cancer prevention and control role, and securing resources for implementation of state cancer plans.

Setting: A literature review of state cancer control program information needs, state roles in cancer control, existing resources, policy environment, and other factors relevant to state policymaking was conducted. Three states were interviewed to document the critical needs, develop the template, and test the tools.

Interventions: A template was developed to describe issues relevant to several cancer sites; different populations; and prevention, detection, diagnosis, and treatment. The template for a tool was designed to present state-specific issues and information in a focused and appealing format. The template accommodated the variety of state-specific needs and cancer issues of concern.

Outcomes: In each of the states, three to four issues were identified and tools were created using the template. Each tool was constructed around one issue, supported by facts and effective strategies. A brochure format was used.

Conclusions: The template strategy of issue-identification and provision of information about the state cancer status, cancer epidemiology and health services, and best practices in creation of these tools produced effective state-specific means for influencing cancer control programs. The tools integrated various cancer concerns and solutions around a single issue. The issue- specific tools created could be completed for other states using their own data. Audiences for the tools ranged from health department cancer control staff to external organizations.

Learning Objectives: Participants will be able to describe the elements of the template for informing cancer control policy and programs and the process for turning it into an effective state-specific tool for furthering cancer control.

Use of Qualitative Evaluation Methods to Inform Program Planning for a Chronic Disease Prevention Program

R. Palombo, P. Troped, K. Foell, D. Klaus, J. Evans, M. Sweeney

Objective: To use qualitative research methods to gather data from providers for program planning and evaluation.

Methods: A qualitative study using focus groups and key informant interviews was conducted with providers, site coordinators, administrators, and outreach staff from 22 Massachusetts WISEWOMAN Program (MWWP) sites. MWWP is a cardiovascular disease (CVD) prevention program added to existing NBCCEDP services for uninsured and underinsured low-income and minority women aged 50 years and older. This study was implemented to evaluate program effectiveness, identify successful program components and barriers, determine provider and administrator satisfaction, and solicit recommendations for future program improvements.

Results: Preliminary data have provided important insights related to program effectiveness from the perspective of providers and administrators. The linkage with primary care services and the comprehensive nature of the program, including CVD, colorectal, and osteoporosis chronic disease screening and counseling, have been particularly well-received. Barriers to recruitment of women and medical provider involvement were identified. Suggestions for streamlining the program and preparing for statewide implementation were identified.

Conclusions: Program planning is strengthened when qualitative evaluation methods are used in conjunction with quantitative methods. Formal input from multiple stakeholders is essential for understanding the program from different perspectives, improving program quality, and identifying the most effective ways to support maintenance of healthy behaviors among older women.

Learning Objectives: Participants should be able to describe how the use of qualitative methods can result in more effective program planning and improved services for women.

Comparison of Opinions of West Virginian and Scottish Youths Toward Tobacco Control Policies

R. Anderson, L. MacFadyen, K. Williams, G. Hastings

Objective: To determine and compare opinions of young smokers in two countries toward current and potential tobacco control policies aimed at discouraging smoking among young people.

Methods: We conducted 17 focus groups of youth smokers in West Virginia and Scotland. Groups were segregated by sex. We studied their views of such policies as access laws, clean indoor air, warning labels, marketing, price, and ingredients, and of the tobacco industry. Interviews were audiotaped, transcribed, and coded, using quantitative software, QSR NUD.IST.

Results: Young people in both countries report no difficulty buying cigarettes, and they believe warning labels are virtually worthless. They find significant price increases to be the strongest deterrent that could be invoked. However, Scottish youths report buying single cigarettes (even though this is illegal). West Virginia youths predict more theft if there is a major price increase. Schools prohibit smoking, but youths violate it without being caught (especially in West Virginia), and they observe teachers smoking. Scottish young people have no understanding of the tobacco industry's marketing tactics. West Virginia young people have some recognition of this issue. However, both believe their decision to smoke is independent of tobacco advertising and promotions.

Conclusions: These young people easily violate current laws, and doubt most other current and proposed policies will work, other than to raise prices substantially. Policymakers need to consider the opinions and needs of young smokers, just as the tobacco industry has done for decades.



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